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Initial Intel Xeon Platinum 8380 2P Benchmarks

2021H2 Benchmarks of Epyc 75F3 after platform, software and firmware updates.

Automated Executive Summary

EPYC 7763 2P had the most wins, coming in first place for 42% of the tests.

Based on the geometric mean of all complete results, the fastest (EPYC 7763 2P) was 1.905x the speed of the slowest (Xeon Platinum 8280). EPYC 7713 2P was 0.953x the speed of EPYC 7763 2P, EPYC 75F3 2P was 0.975x the speed of EPYC 7713 2P, Xeon Platinum 8380 2P was 0.982x the speed of EPYC 75F3 2P, Epyc 75F3 2P Q4 2021 was 0.99x the speed of Xeon Platinum 8380 2P, EPYC 7763 was 0.881x the speed of Epyc 75F3 2P Q4 2021, EPYC 7713 was 0.973x the speed of EPYC 7763, EPYC 75F3 was 0.92x the speed of EPYC 7713, Xeon Platinum 8280 2P was 0.976x the speed of EPYC 75F3, Xeon Platinum 8280 was 0.754x the speed of Xeon Platinum 8280 2P.

The results with the greatest spread from best to worst included:

*Botan (Test: AES-256) at 8.07x
m-queens (Time To Solve) at 6.26x
Facebook RocksDB (Test: Random Read) at 5.53x
ASTC Encoder (Preset: Exhaustive) at 5.353x
Aircrack-ng at 5.329x
toyBrot Fractal Generator (Implementation: TBB) at 5.113x*

Blender (*Blend File: Classroom - Compute: CPU-Only*) at 5.013x
Blender (*Blend File: Classroom - Compute: CPU-Only*) at 4.958x
toyBrot Fractal Generator (*Implementation: C++ Threads*) at 4.754x
Coremark (*CoreMark Size 666 - Iterations Per Second*) at 4.754x.

Test Systems:

EPYC 75F3

Processor: AMD EPYC 75F3 32-Core @ 2.95GHz (32 Cores / 64 Threads), Motherboard: AMD DAYTONA_X (RYM1001D BIOS), Chipset: AMD Starship/Matisse, Memory: 8 x 32 GB DDR4-3200MT/s 36ASF4G72PZ-3G2E2, Disk: 3841GB Micron_9300_MTFDHAL3T8TDP, Graphics: llvmpipe, Monitor: VE228, Network: 2 x Mellanox MT27710

OS: Ubuntu 20.04, Kernel: 5.11.0-051100rc6daily20210201-generic (x86_64) 20210131, Desktop: GNOME Shell 3.36.4, Display Server: X Server, OpenGL: 4.5 Mesa 20.2.6 (LLVM 11.0.0 256 bits), Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale-gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr.hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch=32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - CPU Microcode: 0xa001119
Python Notes: Python 3.8.5
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbs: Not affected + tsx_async_abort: Not affected

EPYC 75F3 2P

Processor: 2 x AMD EPYC 75F3 32-Core @ 2.95GHz (64 Cores / 128 Threads), Motherboard: AMD DAYTONA_X (RYM1001D BIOS), Chipset: AMD Starship/Matisse, Memory: 16 x 32 GB DDR4-3200MT/s 36ASF4G72PZ-3G2E2, Disk: 3841GB Micron_9300_MTFDHAL3T8TDP, Graphics: llvmpipe, Monitor: VE228, Network: 2 x Mellanox MT27710

OS: Ubuntu 20.04, Kernel: 5.11.0-051100rc6daily20210201-generic (x86_64) 20210131, Desktop: GNOME Shell 3.36.4, Display Server: X Server, OpenGL: 4.5 Mesa 20.2.6 (LLVM 11.0.0 256 bits), Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale-gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr.hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch=32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - CPU Microcode: 0xa001119
Python Notes: Python 3.8.5
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbs: Not affected + tsx_async_abort: Not affected

EPYC 7713

Processor: AMD EPYC 7713 64-Core @ 2.00GHz (64 Cores / 128 Threads), Motherboard: AMD DAYTONA_X

(RYM1001D BIOS), Chipset: AMD Starship/Matisse, Memory: 8 x 32 GB DDR4-3200MT/s 36ASF4G72PZ-3G2E2, Disk: 3841GB Micron_9300_MTFDHAL3T8TDP, Graphics: llvmpipe, Monitor: VE228, Network: 2 x Mellanox MT27710

OS: Ubuntu 20.04, Kernel: 5.11.0-051100rc6daily20210201-generic (x86_64) 20210131, Desktop: GNOME Shell 3.36.4, Display Server: X Server, OpenGL: 4.5 Mesa 20.2.6 (LLVM 11.0.0 256 bits), Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr.hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - CPU Microcode: 0xa001119
Python Notes: Python 3.8.5
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retroline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbs: Not affected + tsx_async_abort: Not affected

EPYC 7713 2P

Processor: 2 x AMD EPYC 7713 64-Core @ 2.00GHz (128 Cores / 256 Threads), Motherboard: AMD DAYTONA_X (RYM1001D BIOS), Chipset: AMD Starship/Matisse, Memory: 16 x 32 GB DDR4-3200MT/s 36ASF4G72PZ-3G2E2, Disk: 3841GB Micron_9300_MTFDHAL3T8TDP, Graphics: llvmpipe, Monitor: VE228, Network: 2 x Mellanox MT27710

OS: Ubuntu 20.04, Kernel: 5.11.0-051100rc6daily20210201-generic (x86_64) 20210131, Desktop: GNOME Shell 3.36.4, Display Server: X Server, OpenGL: 4.5 Mesa 20.2.6 (LLVM 11.0.0 256 bits), Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr.hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - CPU Microcode: 0xa001119
Python Notes: Python 3.8.5
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retroline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbs: Not affected + tsx_async_abort: Not affected

EPYC 7763

Processor: AMD EPYC 7763 64-Core @ 2.45GHz (64 Cores / 128 Threads), Motherboard: AMD DAYTONA_X (RYM1001D BIOS), Chipset: AMD Starship/Matisse, Memory: 8 x 32 GB DDR4-3200MT/s 36ASF4G72PZ-3G2E2, Disk: 3841GB Micron_9300_MTFDHAL3T8TDP, Graphics: llvmpipe, Monitor: VE228, Network: 2 x Mellanox MT27710

OS: Ubuntu 20.04, Kernel: 5.11.0-051100rc6daily20210201-generic (x86_64) 20210131, Desktop: GNOME Shell 3.36.4, Display Server: X Server, OpenGL: 4.5 Mesa 20.2.6 (LLVM 11.0.0 256 bits), Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr.hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - CPU Microcode: 0xa001119
Python Notes: Python 3.8.5
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retroline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbs: Not affected + tsx_async_abort: Not affected

EPYC 7763 2P

Processor: 2 x AMD EPYC 7763 64-Core @ 2.45GHz (128 Cores / 256 Threads), Motherboard: AMD DAYTONA_X (RYM1001D BIOS), Chipset: AMD Starship/Matisse, Memory: 16 x 32 GB DDR4-3200MT/s 36ASF4G72PZ-3G2E2, Disk: 3841GB Micron_9300_MTFDHAL3T8TDP, Graphics: llvmpipe, Monitor: VE228, Network: 2 x Mellanox MT27710

OS: Ubuntu 20.04, Kernel: 5.11.0-051100rc6daily20210201-generic (x86_64) 20210131, Desktop: GNOME Shell 3.36.4, Display Server: X Server, OpenGL: 4.5 Mesa 20.2.6 (LLVM 11.0.0 256 bits), Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9.3.0/debian/tmp-nvptx/usr.hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - CPU Microcode: 0xa001119

Python Notes: Python 3.8.5

Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swaps barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbd: Not affected + tsx_async_abort: Not affected

Xeon Platinum 8280

Processor: Intel Xeon Platinum 8280 @ 4.00GHz (28 Cores / 56 Threads), Motherboard: GIGABYTE MD61-SC2-00 v01000100 (T15 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 6 x 32 GB DDR4-2933MT/s HMA84GR7CJR4N-WM, Disk: 3841GB Micron_9300_MTFDHAL3T8TDP, Graphics: llvmpipe, Monitor: VE228, Network: 2 x Intel X722 for 1GbE + 2 x QLogic FastLinQ QL41000 10/25/40/50GbE

OS: Ubuntu 20.04, Kernel: 5.11.0-051100rc6daily20210201-generic (x86_64) 20210131, Desktop: GNOME Shell 3.36.4, Display Server: X Server, OpenGL: 4.5 Mesa 20.2.6 (LLVM 11.0.0 256 bits), Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9.3.0/debian/tmp-nvptx/usr.hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x5003003

Java Notes: OpenJDK Runtime Environment (build 11.0.10+9-Ubuntu-0ubuntu1.20.04)

Python Notes: Python 3.8.5

Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swaps barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbd: Not affected + tsx_async_abort: Mitigation of TSX disabled

Xeon Platinum 8280 2P

Processor: 2 x Intel Xeon Platinum 8280 @ 4.00GHz (56 Cores / 112 Threads), Motherboard: GIGABYTE MD61-SC2-00 v01000100 (T15 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 12 x 32 GB DDR4-2933MT/s HMA84GR7CJR4N-WM, Disk: 3841GB Micron_9300_MTFDHAL3T8TDP, Graphics: llvmpipe, Monitor: VE228, Network: 2 x Intel X722 for 1GbE + 2 x QLogic FastLinQ QL41000 10/25/40/50GbE

OS: Ubuntu 20.04, Kernel: 5.11.0-051100rc6daily20210201-generic (x86_64) 20210131, Desktop: GNOME Shell 3.36.4, Display Server: X Server, OpenGL: 4.5 Mesa 20.2.6 (LLVM 11.0.0 256 bits), Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9.3.0/debian/tmp-nvptx/usr.hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686

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--with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x5003003
Java Notes: OpenJDK Runtime Environment (build 11.0.10+9-Ubuntu-0ubuntu1.20.04)
Python Notes: Python 3.8.5
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbs: Not affected + tsx_async_abort: Mitigation of TSX disabled

Xeon Platinum 8380 2P

Processor: 2 x Intel Xeon Platinum 8380 @ 3.40GHz (80 Cores / 160 Threads), Motherboard: Intel M50CYP2SB2U (SE5C6200.86B.0022.D08.2103221623 BIOS), Chipset: Intel Device 0998, Memory: 16 x 32 GB DDR4-3200MT/s Hynix HMA84GR7CJR4N-XN, Disk: 2 x 7682GB INTEL SSDPF2KX076TZ + 2 x 800GB INTEL SSDPF21Q800GB + 3841GB Micron_9300_MTFDHAL3T8TDP + 960GB INTEL SSDSC2KG96, Graphics: ASPEED, Monitor: VE228, Network: 2 x Intel X710 for 10GBASE-T + 2 x Intel E810-C for QSFP

OS: Ubuntu 20.04, Kernel: 5.11.0-051100-generic (x86_64), Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.8, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale-gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEA/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch=32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0xd000270
Python Notes: Python 2.7.18 + Python 3.8.5
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbs: Not affected + tsx_async_abort: Not affected

Epyc 75F3 2P Q4 2021

Processor: 2 x AMD EPYC 75F3 32-Core @ 2.95GHz (64 Cores / 128 Threads), Motherboard: GIGABYTE MZ72-HB0-00 v01000100 (M05 BIOS), Chipset: AMD Starship/Matisse, Memory: 504GB, Disk: 2 x 800GB INTEL SSDPF21Q800GB + 2000GB Toshiba MKNSSDGA2TB-D8, Graphics: ASPEED, Monitor: DELL U2711, Network: 2 x Broadcom BCM57416 NetXtreme-E Dual-Media 10G RDMA

OS: Ubuntu 21.10, Kernel: 5.11.0-20-generic (x86_64), Desktop: KDE Plasma 5.22.4, Display Server: X Server 1.20.11, OpenGL: 4.5 Mesa 21.1.4 (LLVM 12.0.1 256 bits), Vulkan: 1.1.168, Compiler: GCC 11.2.0, File-System: ext4, Screen Resolution: 1600x1200

Kernel Notes: nvme.poll_queues=64 nvme.io_poll=1 nvme.io_poll_delay=0 - Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-cet --enable-checking=release --enable-clocale-gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-serialization=2 --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-11-M6DaQn/gcc-11-11.2.0/debian/tmp-nvptx/usr,amdgn-amdhsa=/build/gcc-11-M6DaQn/gcc-11-11.2.0/debian/tmp-gcn/usr --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch=32=i686 --with-build-config=bootstrap-lto-lean --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - CPU Microcode: 0xa001133
Python Notes: Python 3.9.6
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retrpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbs: Not affected + tsx_async_abort: Not affected

	Epyc 75F3	Epyc 75F3 2P	Epyc 7713	Epyc 7713 2P	Epyc 7763	Epyc 7763 2P	Xeon Platinum 8280	Xeon Platinum 8280 2P	Xeon Platinum 8380 2P	Epyc 75F3 2P	Q4 2021
OSPray - NASA	66.67	111.11	83.33	142.86	100	166.67	50	90.91	142.86	120.37	
Streamlines - SciVis (FPS)											
Normalized	40%	66.66%	50%	85.71%	60%	100%	30%	54.54%	85.71%	72.22%	
Standard Deviation	0%	0%	0%	0%	0%	0%	0%	0%	0%	5.6%	
OSPray - NASA	0.48	0.47	0.76	0.73	0.87	0.85	0.56	0.64	0.598		
Streamlines - SciVis (FPS/Watt)											
Normalized	55.17%	54.02%	87.36%	83.91%	100%	97.7%	64.37%	73.56%	68.74%		
OSPray - NASA	13.89	25	17.86	32.26	21.74	38.46	9.46	18.18	28.41	25.64	
Streamlines - Path Tracer (FPS)											
Normalized	36.12%	65%	46.44%	83.88%	56.53%	100%	24.6%	47.27%	73.87%	66.67%	
Standard Deviation	0%	0%	0%	0%	0%	0%	0.5%	0%	1.2%	0%	
OSPray - NASA	0.07	0.07	0.10	0.11	0.11	0.12	0.07	0.07	0.077		
Streamlines - Path Tracer (FPS/Watt)											
Normalized	58.33%	58.33%	83.33%	91.67%	91.67%	100%	58.33%	58.33%	64.17%		
OSPray - San Miguel - SciVis	50	83.33	62.5	100	76.92	125	38.46	71.43	100	77.78	
Miguel - SciVis											
Normalized	40%	66.66%	50%	80%	61.54%	100%	30.77%	57.14%	80%	62.22%	
Standard Deviation	0%	0%	0%	0%	0%	0%	0%	0%	0%	10.5%	
OSPray - San Miguel - SciVis	0.46	0.42	0.68	0.57	0.86	0.75	0.57	0.63	0.448		
Blender - BMW27 - CPU-Only (sec)	45.79	26.41	35.81	24.08	32.12	21.46	68.87	37.83	28.23	25.77	
Blender - BMW27 - Classroom											
Normalized	46.87%	81.26%	59.93%	89.12%	66.81%	100%	31.16%	56.73%	76.02%	83.28%	
Standard Deviation	0.2%	0.3%	0.5%	0.3%	0.3%	0.7%	0.4%	1.1%	1%	0.2%	
Blender - Classroom	126.28	64.65	92.19	48.32	81.13	41.69	206.69	104.49	70.40	64.60	
LuxCoreRender - DLSC (M samples/sec)											
Normalized	33.01%	64.49%	45.22%	86.28%	51.39%	100%	20.17%	39.9%	59.22%	64.54%	
Standard Deviation	0.2%	0.4%	0.1%	0.7%	0.2%	0.2%	0.2%	0.4%	0.1%	0.1%	
LuxCoreRender - DLSC (M samples/sec)	6.17	11.16	8.13	14.56	9.36	17.68	3.79	7.32	10.53	11.78	
LuxCoreRender - R.C.a.P (M samples/sec)											
Normalized	34.9%	63.12%	45.98%	82.35%	52.94%	100%	21.44%	41.4%	59.56%	66.63%	
Standard Deviation	1%	0.9%	0.2%	0.6%	0.8%	2.4%	0.4%	0.3%	2.4%	0.2%	
LuxCoreRender - R.C.a.P (M samples/sec)	6.66	11.80	8.84	15.63	10.06	19.25	4.09	7.91	11.26	12.48	
Timed Linux Kernel Compilation - Time To Compile (sec)	29.400	20.114	26.340	19.832	23.885	18.965	39.574	25.923	20.510		
Timed Linux Kernel Compilation - Time To Compile (sec)											
Normalized	64.51%	94.29%	72%	95.63%	79.4%	100%	47.92%	73.16%	92.47%		
Standard Deviation	2.3%	2.5%	2.4%	3%	2.4%	2.8%	2%	2.4%	2.4%		

Timed	13.863	11.928	14.193	12.881	13.911	12.861	20.323	16.539	13.089	11.040
ImageMagick										
Compilation - Time										
Normalized	79.64%	92.56%	77.78%	85.71%	79.36%	85.84%	54.32%	66.75%	84.35%	100%
Standard Deviation	0.4%	0.4%	1.5%	0.9%	0.6%	0.9%	0.5%	2.3%	2.3%	1.8%
Timed LLVM	222.233	170.489	216.239	183.848	202.714	178.955	309.287	218.891	184.170	
Compilation - Time										
To Compile (sec)										
Normalized	76.72%	100%	78.84%	92.73%	84.1%	95.27%	55.12%	77.89%	92.57%	
Standard Deviation	1.4%	1.1%	1.4%	0.4%	1%	0.8%	2.4%	1%	0.3%	
Timed FFmpeg	21.965	16.765	20.808	17.142	19.772	16.546	31.865	23.312	18.606	13.446
Compilation - Time										
To Compile (sec)										
Normalized	61.22%	80.2%	64.62%	78.44%	68.01%	81.26%	42.2%	57.68%	72.27%	100%
Standard Deviation	0.4%	0.7%	0.4%	0.6%	0.6%	0.5%	0.1%	0.7%	0.2%	0.6%
Build2 - Time To Compile (sec)	56.981	50.644	60.930	55.758	59.008	55.741	74.770	62.172	55.640	48.533
Timed Godot Game										
Engine Compilation - Time To Compile (sec)										
Normalized	85.06%	97.29%	86.44%	84.32%	91.07%	86.53%	61.08%	77.23%	89.9%	100%
Standard Deviation	0.4%	0.9%	0.3%	0.1%	0.4%	0.6%	0.4%	0.4%	2.5%	1.7%
ACES DGEMM - Time (GFLOP/s)	11.19956	21.54041	20.17912	31.95021	23.12654	38.58069	10.89618	20.65628	28.13491	19.49940
S.F.P.R (GFLOP/s)										
Normalized	29.03%	55.83%	52.3%	82.81%	59.94%	100%	28.24%	53.54%	72.92%	50.54%
Standard Deviation	0.2%	0.6%	0.9%	2.3%	2.1%	1.7%	0.8%	1.3%	0.9%	5.1%
FFTE - N.2.3.C.F.R (MFLOPS)	184877	283465	207113	234137	240689	244871	108582	164805	259072	256563
Normalized	65.22%	100%	73.06%	82.6%	84.91%	86.38%	38.31%	58.14%	91.39%	90.51%
Standard Deviation	0.4%	6.5%	1%	5.8%	1.2%	6.5%	0.2%	2.2%	1.8%	10.8%
FFTE - N.2.3.C.F.R (MFLOPS/Watt)	1326	925.37	1825	1024	1892	990.89	1171	804.72	844.85	
Conjugate Gradient (GFLOP/s)										
Normalized	70.08%	48.9%	96.41%	54.13%	100%	52.36%	61.89%	42.52%	44.64%	
High Performance	19.5629	37.0524	19.0134	36.4126	18.9909	36.5299	14.6477	28.8183	41.0330	43.2559
Conjugate Gradient (GFLOP/s/Watt)										
Normalized	90%	80%	90%	80%	100%	90%	90%	80%	78%	

LAMMPS Molecular Dynamics Simulator - Rhodopsin Protein	19.552	27.205	21.148	26.499	24.307	29.786	14.573	22.998	30.796	29.178
Normalized	63.49%	88.34%	68.67%	86.05%	78.93%	96.72%	47.32%	74.68%	100%	94.75%
Standard Deviation	6.7%	5.8%	1.8%	3.3%	4.4%	2.1%	3.7%	4.2%	4.6%	1.4%
LAMMPS Molecular Dynamics Simulator - Rhodopsin Protein	0.21	0.16	0.24	0.14	0.28	0.18	0.22	0.21	0.155	
Normalized	75%	57.14%	85.71%	50%	100%	64.29%	78.57%	75%	55.36%	
LAMMPS Molecular Dynamics Simulator - 20k	22.042	30.560	26.142	32.899	29.545	36.000	15.733	25.098	35.976	28.658
Normalized	61.23%	84.89%	72.62%	91.39%	82.07%	100%	43.7%	69.72%	99.93%	79.61%
Standard Deviation	0.1%	0.2%	0.6%	0.1%	0.6%	0.4%	0.1%	0.1%	0.1%	2.4%
LAMMPS Molecular Dynamics Simulator - 20k Atoms	0.08	0.06	0.12	0.07	0.11	0.07	0.08	0.06	0.068	
Normalized	66.67%	50%	100%	58.33%	91.67%	58.33%	66.67%	50%	56.67%	
LULESH (z/s)	18321	32319	18308	31259	18533	31964	14001	18969	34274	42297
Normalized	43.32%	76.41%	43.28%	73.9%	43.82%	75.57%	33.1%	44.85%	81.03%	100%
Standard Deviation	0.7%	0.8%	0.4%	0.3%	0.2%	0.4%	0.3%	0.3%	0.2%	0.5%
LULESH (z/s/Watt)	112.25	92.80	106.28	88.44	105.85	90.02	102.59	89.07	83.903	
Normalized	100%	82.67%	94.68%	78.79%	94.3%	80.2%	91.39%	79.35%	74.75%	
NAMD - ATPase	0.59493	0.30819	0.45539	0.27316	0.38119	0.22590	0.70897	0.36846	0.26934	0.30281
Simulation - 327,506 Atoms										
Normalized	37.97%	73.3%	49.61%	82.7%	59.26%	100%	31.86%	61.31%	83.87%	74.6%
Standard Deviation	0.1%	0.3%	0.1%	0.6%	0.1%	1.4%	0.1%	0.4%	0.7%	0.4%
GROMACS - Water Benchmark	4.333	7.450	5.036	8.368	5.638	9.864	2.981	5.686	8.909	
Normalized	43.93%	75.53%	51.05%	84.83%	57.16%	100%	30.22%	57.64%	90.32%	
Standard Deviation	0.4%	0.4%	0.3%	0.1%	0.8%	1.4%	0.1%	0.4%	2.5%	
NAS Parallel	3276	6295	4815	9164	5397	10665	3245	6360	9093	6385
Benchmarks - EP.D (Mop/s)										
Normalized	30.72%	59.03%	45.15%	85.92%	50.6%	100%	30.42%	59.63%	85.25%	59.87%
Standard Deviation	0.1%	6.2%	2.8%	3.7%	2.3%	1.8%	3.5%	2.6%	0.6%	4.4%
NAS Parallel	14.56	14.54	23.68	24.48	23.59	26.17	17.33	18.32	20.222	
Benchmarks - EP.D (Mop/s/Watt)										
Normalized	55.64%	55.56%	90.49%	93.54%	90.14%	100%	66.22%	70%	77.27%	
NAS Parallel	118236	264132	133313	257757	141354	282508	74277	139251	198022	281676
Benchmarks - LU.C (Mop/s)										
Normalized	41.85%	93.5%	47.19%	91.24%	50.04%	100%	26.29%	49.29%	70.09%	99.71%
Standard Deviation	0.4%	0.9%	0.7%	1.6%	1.3%	1%	0.1%	0.2%	0.1%	0.7%

Initial Intel Xeon Platinum 8380 2P Benchmarks

NAS Parallel Benchmarks - LU.C (Mop/s/Watt)	579.93	720.50	744.55	800.76	734.33	807.11	525.85	534.47	475.205
Normalized	71.85%	89.27%	92.25%	99.21%	90.98%	100%	65.15%	66.22%	58.88%
Numpy Benchmark (Score)	435.37	432.22	396.38	391.13	377.82	376.65	353.53	348.21	372.72
Normalized	88.9%	88.25%	80.94%	79.86%	77.15%	76.91%	72.19%	71.1%	76.1%
Standard Deviation	0.2%	0.2%	0.1%	1.1%	0.4%	0.2%	0.4%	0.2%	0%
Numpy Benchmark (Score/Watt)	5.14	2.65	5.20	2.57	5.25	2.61	6.65	3.58	1.768
Normalized	77.29%	39.85%	78.2%	38.65%	78.95%	39.25%	100%	53.83%	26.59%
OpenFOAM - Motorbike 60M	205.57	98.66	206.38	93.07	204.99	89.15	356.90	170.20	105.04
Normalized	43.37%	90.36%	43.2%	95.79%	43.49%	100%	24.98%	52.38%	84.87%
Standard Deviation	0.1%	0.1%	0.2%	0.4%	0.2%	0.1%	0.3%	0.1%	0.8%
Quantum	1130	940.23	1047	1105	961.58	1068	1667	1526	1159
ESPRESSO - AUSURF112 (sec)									
Normalized	83.19%	100%	89.79%	85.05%	97.78%	88.02%	56.4%	61.6%	81.09%
Standard Deviation	0.2%	0.6%	0%	0.6%	0.3%	1.2%	0.7%	10.3%	4.7%
Rodinia - OpenMP	8.179	6.903	6.755	6.182	6.547	6.136	8.428	6.784	4.702
CFD Solver (sec)									
Normalized	57.49%	68.12%	69.61%	76.06%	71.82%	76.63%	55.79%	69.31%	100%
Standard Deviation	0.4%	1.4%	0.4%	1.1%	2.4%	2.3%	0.5%	0.5%	3.5%
Rodinia - OpenMP	57.628	32.639	44.941	27.442	40.306	23.698	101.699	55.945	39.023
LavaMD (sec)									
Normalized	41.12%	72.61%	52.73%	86.36%	58.8%	100%	23.3%	42.36%	60.73%
Standard Deviation	0.1%	0.5%	0.1%	2.3%	0%	2.1%	1%	0.8%	0.4%
Rodinia - O.S (sec)	6.163	7.873	5.848	7.519	5.840	7.963	9.777	11.648	7.822
Normalized	94.76%	74.18%	99.86%	77.67%	100%	73.34%	59.73%	50.14%	74.66%
Standard Deviation	0.9%	4.6%	0.5%	5.8%	0.5%	8.3%	3.7%	4.1%	2.9%
Caffe - AlexNet - CPU - 200 (ms)	92176	100358	73700	108154	67226	107920	114893	121212	66379
Normalized	72.01%	66.14%	90.07%	61.37%	98.74%	61.51%	57.77%	54.76%	100%
Standard Deviation	0.2%	2.4%	0.1%	4.4%	0.1%	6.4%	0.2%	0.3%	0.9%
LeelaChessZero - Eigen (Nodes/s)	2867	6249	3075	3919	3522	4583	1808	3021	4232
Normalized	45.88%	100%	49.21%	62.71%	56.36%	73.34%	28.93%	48.34%	67.72%
Standard Deviation	0.7%	2.1%	1.1%	3.2%	1.5%	4.1%	2.3%	3.1%	5.3%
LeelaChessZero - Eigen (Nodes/s/Watt)	11.07	13.14	14.63	11.23	15.17	12.30	10.69	10.62	9.994
Normalized	72.97%	86.62%	96.44%	74.03%	100%	81.08%	70.47%	70.01%	65.88%
Numenta Anomaly Benchmark - B.C (sec)	26.075	26.659	30.778	29.858	30.952	30.435	35.268	35.221	30.370
Normalized	100%	97.81%	84.72%	87.33%	84.24%	85.67%	73.93%	74.03%	85.86%
Standard Deviation	1.6%	2.1%	1.9%	2.3%	2.4%	2%	1.5%	2.4%	1.9%

Numenta Anomaly Benchmark - Relative Entropy (sec)	11.976	11.978	14.020	14.427	14.053	14.502	14.657	14.535	12.744	
Normalized	100%	99.98%	85.42%	83.01%	85.22%	82.58%	81.71%	82.39%	93.97%	
Standard Deviation	1.5%	1.3%	1.1%	1.6%	2.4%	0.9%	2.4%	1.1%	2.4%	
Numenta Anomaly Benchmark - Earthgecko Skyline (sec)	69.175	67.006	81.617	76.965	81.077	77.259	90.915	87.270	70.106	
Normalized	96.86%	100%	82.1%	87.06%	82.64%	86.73%	73.7%	76.78%	95.58%	
Standard Deviation	2.5%	1.4%	0.5%	2%	1.1%	0.9%	0.3%	0.2%	1.5%	
oneDNN - C.B.S.A -	1.65139	0.972784	1.63243	0.905822	1.62445	0.878464	3.53430	3.69729	0.914218	0.978248
u8s8f32 - CPU (ms)										
Normalized	53.2%	90.3%	53.81%	96.98%	54.08%	100%	24.86%	23.76%	96.09%	89.8%
Standard Deviation	0.8%	19.4%	0.4%	13.3%	0.4%	17.2%	0.4%	0.4%	0.7%	0.3%
oneDNN - D.B.s -	1.34719	1.34879	1.60728	1.65277	1.24455	1.53062	0.382393	0.428054	0.356307	1.30693
u8s8f32 - CPU (ms)										
Normalized	26.45%	26.42%	22.17%	21.56%	28.63%	23.28%	93.18%	83.24%	100%	27.26%
Standard Deviation	0.6%	0.4%	0.6%	2.5%	2.1%	0.8%	0.3%	0.9%	1.1%	5.2%
oneDNN -	0.414750	0.396737	0.390600	0.497148	0.365741	0.471527	0.477601	0.324674	0.249861	0.368654
M.M.B.S.T - f32 -										
Normalized	60.24%	62.98%	63.97%	50.26%	68.32%	52.99%	52.32%	76.96%	100%	67.78%
Standard Deviation	0.2%	2.4%	1.9%	3.9%	0.6%	1.2%	0.5%	2.4%	0.7%	1.2%
oneDNN -	0.793263	0.565819	0.651104	0.623779	0.617255	0.610584	0.318260	0.266871	0.210287	0.555395
M.M.B.S.T - u8s8f32										
Normalized	26.51%	37.17%	32.3%	33.71%	34.07%	34.44%	66.07%	78.8%	100%	37.86%
Standard Deviation	0.7%	1.5%	0.7%	0.8%	1%	2.4%	1.1%	1.7%	0.8%	0.3%
OpenVINO -	23408	39741	30013	47417	29330	55233	22843	38537	43435	
A.G.R.R.O.F - CPU (FPS)										
Normalized	42.38%	71.95%	54.34%	85.85%	53.1%	100%	41.36%	69.77%	78.64%	
Standard Deviation	0.1%	1.1%	0.1%	2.6%	0.2%	0.8%	0.1%	0.1%	0.3%	
OpenVINO -	23445	39693	30386	48158	29277	54871	22672	38458	43231	
A.G.R.R.O.F - CPU (FPS)										
Normalized	42.73%	72.34%	55.38%	87.77%	53.36%	100%	41.32%	70.09%	78.79%	
Standard Deviation	0.1%	0.1%	0.2%	2.4%	0%	1.2%	0%	0.3%	0.2%	
OpenVINO - P.D.O.F	5.33	10.39	6.67	12.79	7.67	14.83	4.69	8.91	12.74	
- CPU (FPS)										
Normalized	35.94%	70.06%	44.98%	86.24%	51.72%	100%	31.63%	60.08%	85.91%	
Standard Deviation	0.1%	0.1%	0.2%	0.1%	0.2%	0.3%	0%	0.2%	0.4%	
OpenVINO - P.D.O.F	5.32	10.44	6.66	12.77	7.67	14.85	4.63	8.75	12.59	
- CPU (FPS)										
Normalized	35.82%	70.3%	44.85%	85.99%	51.65%	100%	31.18%	58.92%	84.78%	
Standard Deviation	0.1%	0.7%	0%	0.6%	0.2%	0.5%	0.5%	0.2%	0.5%	
TensorFlow Lite -	742802	674486	616438	490895	547717	416529	1392860	867565	570826	902258
I.R.V (us)										
Normalized	56.08%	61.76%	67.57%	84.85%	76.05%	100%	29.9%	48.01%	72.97%	46.17%
Standard Deviation	0.1%	7.1%	0.9%	9.7%	1.9%	4.8%	0.2%	2.6%	0.5%	0.8%

Initial Intel Xeon Platinum 8380 2P Benchmarks

John The Ripper - MD5 (Real C/S)	3896000	7443000	5336333	9772000	6054000	11203000	4219333	8087333	1033433
Normalized	34.78%	66.44%	47.63%	87.23%	54.04%	100%	37.66%	72.19%	92.25%
Standard Deviation	0.8%	2.4%	0.5%	1.3%	0.2%	1.1%	0.3%	1.3%	0.4%
John The Ripper - MD5 (Real)	15276	14981	24644	22815	23750	23605	21913	21068	20177
Normalized	61.99%	60.79%	100%	92.58%	96.37%	95.78%	88.92%	85.49%	81.87%
John The Ripper - 67262	134920	95825	185026	108557	190570	42998	85164	117043	
Blowfish (Real C/S)									
Normalized	35.3%	70.8%	50.28%	97.09%	56.96%	100%	22.56%	44.69%	61.42%
Standard Deviation	0.1%	0%	0%	0.7%	0.1%	1.6%	0.1%	0.1%	0%
John The Ripper - Blowfish (Real C/S/Watt)	276.29	272.06	462.12	446.55	443.07	389.78	235.78	232.57	237.624
Normalized	59.79%	58.87%	100%	96.63%	95.88%	84.35%	51.02%	50.33%	51.42%
dav1d - Summer	445.90	510.57	489.13	565.70	530.55	578.43	309.95	385.23	516.00
Nature 4K (FPS)									
Normalized	77.09%	88.27%	84.56%	97.8%	91.72%	100%	53.58%	66.6%	89.21%
Standard Deviation	0.2%	1.2%	0.4%	1.8%	0.4%	2.3%	0%	0.7%	0.2%
dav1d - Summer	3.54	2.33	4.62	2.90	5.33	3.17	3.79	2.79	2.067
Nature 4K (FPS/Watt)									
Normalized	66.42%	43.71%	86.68%	54.41%	100%	59.47%	71.11%	52.35%	38.78%
Kvazaar -	40.76	49.73	37.82	49.81	41.16	53.12	21.33	31.09	38.51
Bosphorus 4K -									
Normalized	76.73%	93.62%	71.2%	93.77%	77.48%	100%	40.15%	58.53%	72.5%
Standard Deviation	0.1%	0.8%	0.3%	1.6%	0.2%	4%	0.3%	0.3%	0.9%
SVT-AV1 - Enc	72.320	107.985	86.369	92.732	94.453	100.413	58.128	66.347	107.352
Mode 8 - 1080p (FPS)									
Normalized	66.97%	100%	79.98%	85.87%	87.47%	92.99%	53.83%	61.44%	99.41%
Standard Deviation	0.8%	1.1%	1.6%	1.9%	0.4%	1.3%	1.4%	0.9%	1.7%
SVT-AV1 - Enc	0.52	0.48	0.78	0.49	0.85	0.56	0.61	0.51	0.465
Mode 8 - 1080p (FPS/Watt)									
Normalized	61.18%	56.47%	91.76%	57.65%	100%	65.88%	71.76%	60%	54.71%
x265 - Bosphorus	31.62	24.99	29.64	23.72	30.56	24.37	24.61	23.30	27.97
4K (FPS)									21.49
Normalized	100%	79.03%	93.74%	75.02%	96.65%	77.07%	77.83%	73.69%	88.46%
Standard Deviation	0.5%	2%	1.2%	2.4%	1.3%	5.7%	0.4%	1%	2.4%
x265 - Bosphorus	0.17	0.08	0.19	0.09	0.20	0.10	0.18	0.12	0.089
4K (FPS/Watt)									
Normalized	85%	40%	95%	45%	100%	50%	90%	60%	44.5%
WebP2 Image	103.953	103.108	127.797	122.007	125.975	122.776	137.918	135.038	119.139
Encode - Q.7.C.E.7 (sec)									
Normalized	99.19%	100%	80.68%	84.51%	81.85%	83.98%	74.76%	76.35%	86.54%
Standard Deviation	0.2%	0.8%	0.2%	0.7%	0.2%	1.2%	0%	2.3%	0.1%

WebP2 Image Encode - Q.9.C.E.7	194.644	194.179	238.893	226.055	235.431	228.781	256.124	247.513	220.702
(sec)									
Aircrack-ng (k/s)									
Normalized	99.76%	100%	81.28%	85.9%	82.48%	84.88%	75.81%	78.45%	87.98%
Standard Deviation	0.2%	0.4%	0.4%	1%	0.2%	0.2%	0.2%	2.4%	0.1%
PostgreSQL	135067	269072	182357	360016	206729	411440	77214	152633	209998
Normalized	32.83%	65.4%	44.32%	87.5%	50.25%	100%	18.77%	37.1%	51.04%
Standard Deviation	0%	0%	0.1%	0.2%	0%	0.1%	0.2%	0.2%	0.2%
Aircrack-ng (k/s/Watt)	549.87	541.32	880.18	867.89	882.79	875.17	419.94	416.14	428.888
Normalized	62.29%	61.32%	99.7%	98.31%	100%	99.14%	47.57%	47.14%	48.58%
pgbench - 100 - 100	723355	1042060	877023	1051212	901122	1092273	597074	816046	1298410
pgbench - 100 - 100 - Read Only (TPS)									
Normalized	55.71%	80.26%	67.55%	80.96%	69.4%	84.12%	45.99%	62.85%	100%
Standard Deviation	0.4%	2.2%	0.9%	1.6%	0.5%	2.4%	0.7%	0.1%	0.4%
PostgreSQL	0.139	0.096	0.114	0.095	0.111	0.092	0.167	0.123	0.077
pgbench - 100 - 100 - Read Only - Average Latency (ms)									
Normalized	55.4%	80.21%	67.54%	81.05%	69.37%	83.7%	46.11%	62.6%	100%
Standard Deviation	0.4%	2.4%	1%	1.8%	0.5%	2.5%	0.7%	0%	0%
PyBench - T.F.A.T.T	838	842	923	915	966	968	1098	1071	980
(Milliseconds)									
Normalized	100%	99.52%	90.79%	91.58%	86.75%	86.57%	76.32%	78.24%	85.51%
Standard Deviation	1.3%	1%	0.4%	0.5%	0.5%	0.5%	0.5%	0.3%	0.2%
PyPerformance - crypto_pyaes	94.5	95.7	103	105	109	110	106	105	101
(Milliseconds)									
Normalized	95.45%	94.25%	87.57%	85.9%	82.75%	82%	85.09%	85.9%	89.31%
Standard Deviation	0.2%	0.4%							100%
PyPerformance - float	94.8	94.3	105	106	110	111	111	110	107
(Milliseconds)									
Normalized	99.47%	100%	89.81%	88.96%	85.73%	84.95%	84.95%	85.73%	88.13%
Standard Deviation	0.2%	0.1%		0.5%	0.5%				0.5%
PyPerformance - regex_compile	148	149	164	166	172	172	167	163	167
(Milliseconds)									
Normalized	96.62%	95.97%	87.2%	86.14%	83.14%	83.14%	85.63%	87.73%	85.63%
Standard Deviation							0.3%		100%
PHPBench - P.B.S	715788	700637	639967	641212	481864	606186	665225	667007	731571
(Score)									
Normalized	91.61%	89.67%	81.9%	82.06%	61.67%	77.58%	85.13%	85.36%	93.63%
Standard Deviation	0.6%	0.7%	0.6%	1.2%	1%	1.4%	0.5%	0.2%	0%
PHPBench - P.B.S	9040	4545	8913	4362	7055	4423	13366	7339	3658
(Score/Watt)									
Normalized	67.64%	34%	66.68%	32.63%	52.78%	33.09%	100%	54.91%	27.37%
Facebook RocksDB	2169931	4282813	2943445	5833496	3338954	6661132	1204591	2377545	3487589
- Rand Read (Op/s)									
Normalized	32.58%	64.3%	44.19%	87.58%	50.13%	100%	18.08%	35.69%	52.36%
Standard Deviation	0.1%	0.1%	0.2%	0.3%	0.4%	0.3%	0.4%	0.7%	0.3%

Initial Intel Xeon Platinum 8380 2P Benchmarks

Facebook RocksDB	842936	822480	1350779	1342179	1335964	1339980	624747	615863	679537
- Rand Read (Op/s/Watt)									
Normalized 62.4% 60.89% 100% 99.36% 98.9% 99.2% 46.25% 45.59% 50.31%									
Facebook RocksDB	6568200	9569806	9037590	1304247	9440632	1376840	5643744	6591622	9335500
- Read While Writing (Op/s)									
Normalized 47.7% 69.51% 65.64% 94.73% 68.57% 100% 40.99% 47.87% 67.8%									
Standard Deviation 0.8% 7.7% 1.4% 0.3% 1.2% 7.3% 0.5% 3.5% 2%									
Facebook RocksDB	26287	21371	43034	31014	38600	32274	29201	19211	19276
- Read While Writing (Op/s/Watt)									
Normalized 61.09% 49.66% 100% 72.07% 89.7% 75% 67.86% 44.64% 44.79%									
Botan - AES-256 (MiB/s)	6145	6129	5550	5508	774.377	5288	3806	3805	5675
Normalized 98.33% 98.07% 88.81% 88.14% 12.39% 84.62% 60.9% 60.88% 90.81% 100%									
Standard Deviation 0% 0.1% 0% 0.2% 1.1% 0% 0.1% 0.3% 0.2% 0.2%									
Botan - AES-256 (MiB/s/Watt)	78.94	39.94	78.57	37.99	11.68	39.15	84.52	43.90	28.803
Normalized 93.4% 47.26% 92.96% 44.95% 13.82% 46.32% 100% 51.94% 34.08%									
Crypto++ - Unkeyed Algorithms (MiB/s)	449.9806	447.9656	406.8091	405.9576	385.3538	387.6570	297.2548	297.5944	359.5491
Normalized 98.29% 97.85% 88.86% 88.67% 84.17% 84.68% 64.93% 65% 78.54% 100%									
Standard Deviation 0.3% 0.1% 0.5% 0.2% 0.1% 0.2% 0% 0.2% 0% 0.1%									
Crypto++ - Unkeyed Algorithms (MiB/s/Watt)	5.55	2.84	5.53	2.73	5.56	2.78	5.98	3.19	1.75
Crypto++ - Keyed Algorithms (MiB/s)									
Normalized 92.81% 47.49% 92.47% 45.65% 92.98% 46.49% 100% 53.34% 29.26%									
Crypto++ - Keyed Algorithms (MiB/s)	689.3704	689.1439	624.1514	621.1555	594.2558	594.3984	587.0145	587.6667	569.6911
Normalized 99.17% 99.14% 89.79% 89.36% 85.49% 85.51% 84.45% 84.54% 81.96% 100%									
Standard Deviation 0.3% 0.1% 0.3% 0% 0.4% 0.1% 0.1% 0.1% 0.1% 0.2%									
Crypto++ - Keyed Algorithms (MiB/s/Watt)	8.36	4.25	8.33	4.11	8.48	4.19	11.29	6.05	2.72
Zstd Compression - 19 (MB/s)									
Normalized 74.05% 37.64% 73.78% 36.4% 75.11% 37.11% 100% 53.59% 24.09%									
Zstd Compression - 19 (MB/s/Watt)	141.4	132.1	149.3	131.5	150.2	134.3	115.9	123.3	143.5
Normalized 94.14% 87.95% 99.4% 87.55% 100% 89.41% 77.16% 82.09% 95.54% 75.83%									
Standard Deviation 0.3% 5.1% 1% 2.5% 0.7% 3.7% 0.6% 2.1% 0.8% 5.9%									
Zstd Compression - C.S.T (MIPS)	1.06	0.55	1.19	0.60	1.25	0.67	1.17	0.78	0.538
7-Zip Compression - C.S.T (MIPS/Watt)									
Normalized 84.8% 44% 95.2% 48% 100% 53.6% 93.6% 62.4% 43.04%									
7-Zip Compression - C.S.T (MIPS/Watt)	228617	345019	293706	421175	330026	475912	136018	232100	342101
Normalized 48.04% 72.5% 61.71% 88.5% 69.35% 100% 28.58% 48.77% 71.88% 66.08%									
Standard Deviation 0.4% 2.8% 0.5% 2% 0.3% 2.9% 0.2% 1% 2.4% 2.1%									
7-Zip Compression - C.S.T (MIPS/Watt)	1099	913.81	1710	1374	1757	1446	815.36	775.22	849.29
Normalized 62.55% 52% 97.32% 78.16% 100% 82.3% 46.4% 44.11% 48.33%									

LZ4 Compression -	58.11	57.29	53.49	52.04	50.84	49.02	46.24	45.90	45.81	58.85
9 - Compression Speed (MB/s)										
Normalized										
Standard Deviation										
LZ4 Compression -	14384	13826	13594	13113	13608	13068	6858	6052	7326	6296
9 - D.S (MB/s)										
Normalized										
Standard Deviation										
LZ4 Compression -	163.85	82.58	170.14	83.39	179.89	87.64	133.15	62.93	34.882	
9 - D.S (MB/s/Watt)										
Normalized										
Coremark -	1469386	2862703	1966385	3938555	2169401	4135384	869915	1715124	2336924	2924924
CoreMark Size 666 -										
I.P.S										
Normalized										
Standard Deviation										
Coremark -	5875	5967	9971	10576	10065	10615	4820	5238	5196	
CoreMark Size 666 -										
I.P.S										
(Iterations/Sec/Watt										
Normalized										
OCRMyPDF -	14.084	13.505	15.256	15.490	15.541	15.406	18.413	15.244	13.855	
P.6.P.P.D (sec)										
Normalized										
Standard Deviation										
LibRaw - P.P.B	45.87	41.08	39.83	36.97	39.77	36.66	32.08	30.69	32.88	39.76
(Mpix/sec)										
Normalized										
Standard Deviation										
Google SynthMark -	874.716	874.022	790.745	786.895	754.791	753.929	563.958	566.115	584.021	808.902
VoiceMark_100										
(Voices)										
Normalized										
Standard Deviation										
Basis Universal -	12.085	9.366	10.990	9.246	10.693	9.111	18.450	13.589	11.415	9.390
UASTC Level 2										
Normalized										
Standard Deviation										
Basis Universal -	18.883	12.825	15.887	11.826	14.976	11.409	30.632	19.745	15.497	12.822
UASTC Level 3										
Normalized										
Standard Deviation										
ASTC Encoder -	56.39	29.63	42.30	23.10	37.40	19.32	103.42	52.27	34.23	
Exhaustive (sec)										
Normalized										
Standard Deviation										
QuantLib	2618	2613	2364	2334	2245	2245	2219	2231	2419	3050
Normalized										
Standard Deviation										

QuantLib	32.56	16.84	32.83	15.73	32.64	16.25	44.60	24.35	11.781
(MFLOPS/Watt)									
Normalized	73%	37.76%	73.61%	35.27%	73.18%	36.43%	100%	54.6%	26.41%
FinanceBench - Bonds OpenMP	66681	69777	75541	78724	78707	81512	90404	90532	81339
Normalized	72.95%	69.71%	64.39%	61.79%	61.8%	59.68%	53.81%	53.73%	59.8%
Standard Deviation	0.1%	0.6%	2.4%	4.1%	2.3%	2.2%	1%	0.9%	0.3%
FinanceBench - Repo OpenMP (ms)	37300	40126	41462	44925	43225	45635	50193	50969	45423
Normalized	94.16%	87.53%	84.71%	78.18%	81.26%	76.96%	69.97%	68.91%	77.32%
Standard Deviation	0.2%	1%	1.1%	2.5%	1.6%	0.6%	0.3%	0.8%	0.7%
Stockfish - Total	7503004	1375870	1008316	1850177	1209979	2183501	4902660	9406113	1286048
Time (Nodes/s)	0	16	36	86	44	09	7	7	60
Normalized	34.36%	63.01%	46.18%	84.73%	55.41%	100%	22.45%	43.08%	58.9%
Standard Deviation	2.3%	2.2%	1.9%	2.5%	2.4%	2%	2.1%	0.3%	2.4%
Stockfish - Total	307175	283496	484403	456788	495449	455708	261060	258762	265931
Time									
Normalized	62%	57.22%	97.77%	92.2%	100%	91.98%	52.69%	52.23%	53.67%
asmFish - 1.H.M.2.D	9922821	1840573	1381495	2448108	1568012	2939677	6971445	1339944	1737450
(Nodes/s)	6	90	05	98	22	47	6	37	24
Normalized	33.75%	62.61%	46.99%	83.28%	53.34%	100%	23.72%	45.58%	59.1%
Standard Deviation	0.9%	1.2%	1.9%	1.1%	0.8%	2.1%	1.5%	0.6%	1.6%
asmFish - 1.H.M.2.D	376896	348499	618984	549370	578262	542361	348673	336949	330522
(Nodes/s/Watt)									
Normalized	60.89%	56.3%	100%	88.75%	93.42%	87.62%	56.33%	54.44%	53.4%
m-queens - Time To Solve (sec)	16.798	8.572	11.837	6.244	10.814	5.669	35.488	18.067	11.305
Normalized	33.75%	66.13%	47.89%	90.79%	52.42%	100%	15.97%	31.38%	50.15%
Standard Deviation	0.2%	0.7%	0.2%	0.3%	0.3%	0.9%	0.3%	0.4%	0.5%
Hierarchical	4313715	4296051	3888188	3869435	3713416	3684464	3904142	3905544	4184455
INTegration - FLOAT	73	03	33	10	21	83	66	79	67
FLOAT (QUIPs)									
Normalized	99.25%	98.84%	89.46%	89.03%	85.44%	84.77%	89.82%	89.86%	96.27%
Standard Deviation	0.3%	0%	0.4%	0.4%	0.3%	0.8%	0.2%	0%	0.2%
Hierarchical	5201007	2659007	5186254	2559813	5288471	2594474	7710421	4079119	1978281
INTegration - FLOAT									
Normalized	67.45%	34.49%	67.26%	33.2%	68.59%	33.65%	100%	52.9%	25.66%
OpenVKL - vklBenchmark	463	563	551	560	633	604	363	508	817
(Items / Sec)									
Normalized	56.67%	68.91%	67.44%	68.54%	77.48%	73.93%	44.43%	62.18%	100%
Standard Deviation			0.6%	2.1%	0.6%	3.7%	0.6%	1.7%	0.6%
Intel Open Image Denoise - Memorial	25.14	38.04	30.46	40.38	33.94	40.19	35.46	38.57	63.83
(Images / Sec)									
Normalized	39.39%	59.6%	47.72%	63.26%	53.17%	62.96%	55.55%	60.43%	100%
Standard Deviation	0.1%	0.6%	0.2%	1%	0.1%	1.2%	0.7%	1.1%	1.2%

Benchmark (Figure)	Algebraic	1023648	1886144	1007322	1908343	1006987	1915276	7631361	1471989	2074156	2224342
	Multi-Grid	333	333	000	333	333	000	67	000	667	333
	Normalized	46.02%	84.8%	45.29%	85.79%	45.27%	86.11%	34.31%	66.18%	93.25%	100%
	Standard Deviation	0.2%	0.1%	0.1%	0.2%	0.1%	0.2%	0.3%	0.1%	0.1%	0.2%
NWChem - C240	2912	1640	2162	2059	1973	1826	4989	2683	1827	1686	
Buckyball (sec)											
	Normalized	56.32%	100%	75.84%	79.65%	83.14%	89.82%	32.87%	61.11%	89.74%	97.27%
Ngspice - C2670	(sec)	127.447	128.022	137.543	139.606	143.975	146.471	154.493	151.653	135.399	128.970
	Normalized	100%	99.55%	92.66%	91.29%	88.52%	87.01%	82.49%	84.04%	94.13%	98.82%
	Standard Deviation	0.9%	1.4%	1.2%	1.2%	1.5%	1.2%	2.3%	0.6%	1.1%	1%
GROMACS -	4.334	7.417	5.041	8.250	5.658	9.721	2.978	5.701	8.918		
water_GMX50_bare											
	(Ns/Day)										
	Normalized	44.58%	76.3%	51.86%	84.87%	58.2%	100%	30.63%	58.65%	91.74%	
JPEG XL - JPEG - 8	(MP/s)	30.34	29.69	26.54	25.84	26.17	24.91	24.64	23.03	25.77	
	Normalized	100%	97.86%	87.48%	85.17%	86.26%	82.1%	81.21%	75.91%	84.94%	
	Standard Deviation	0.2%	1%	0.3%	0.9%	0.3%	2.5%	0.1%	0.2%	1.2%	
toyBrot Fractal	10746	5512	7661	4027	6754	3458	17681	9246	6974	5446	
Generator - TBB											
	(ms)										
	Normalized	32.18%	62.74%	45.14%	85.87%	51.2%	100%	19.56%	37.4%	49.58%	63.5%
toyBrot Fractal	11199	6040	8345	5013	7394	4312	17795	9298	7302	6100	
	Generator -										
	OpenMP (ms)										
	Normalized	38.5%	71.39%	51.67%	86.02%	58.32%	100%	24.23%	46.38%	59.05%	70.69%
toyBrot Fractal	10918	6027	8108	4407	7184	3894	17602	9340	7782	5901	
Generator - C++											
	Tasks (ms)										
	Normalized	35.67%	64.61%	48.03%	88.36%	54.2%	100%	22.12%	41.69%	50.04%	65.99%
toyBrot Fractal	10770	5596	7788	4206	6820	3656	17381	9043	7002	5615	
Generator - C++											
	Threads (ms)										
	Normalized	33.95%	65.33%	46.94%	86.92%	53.61%	100%	21.03%	40.43%	52.21%	65.11%
libavif avifenc - 0	(sec)	45.137	46.057	52.028	52.806	52.743	53.367	62.070	60.581	55.231	45.679
	Normalized	100%	98%	86.76%	85.48%	85.58%	84.58%	72.72%	74.51%	81.72%	98.81%
libavif avifenc - 2	(sec)	24.233	25.294	27.535	28.581	28.025	29.274	33.087	34.588	29.714	25.787
	Normalized	100%	95.81%	88.01%	84.79%	86.47%	82.78%	73.24%	70.06%	81.55%	93.97%
libavif avifenc - 6	(sec)	26.593	26.091	29.215	29.972	29.151	29.919	37.330	34.452	29.875	26.861
Lossless (sec)											
	Normalized	98.11%	100%	89.31%	87.05%	89.5%	87.21%	69.89%	75.73%	87.33%	97.13%

	Standard Deviation	0.4%	0.7%	0.1%	0.8%	0.4%	0.4%	0.5%	2%	0.3%	0.9%
dav1d - Summer	455.13	519.69	506.47	587.68	548.71	595.34	320.85	398.92	533.02	481.66	
Nature 4K (FPS)											
Normalized	76.45%	87.29%	85.07%	98.71%	92.17%	100%	53.89%	67.01%	89.53%	80.91%	
Standard Deviation	0.3%	0.9%	0.1%	1.3%	0.6%	2.3%	0.3%	0.7%	0.7%	2.2%	
Blender - BMW27 -	45.88	26.39	35.83	23.93	32.13	21.44	69.68	38.31	28.11	25.97	
CPU-Only (sec)											
Normalized	46.73%	81.24%	59.84%	89.59%	66.73%	100%	30.77%	55.96%	76.27%	82.56%	
Standard Deviation	0.4%	0.7%	0.2%	0.8%	0.4%	0.1%	0.1%	0.4%	0.7%	0.3%	
Blender -	127.01	65.63	92.57	48.64	81.40	41.90	210.05	106.18	70.64	65.11	
Classroom -											
Normalized	32.99%	63.84%	45.26%	86.14%	51.47%	100%	19.95%	39.46%	59.31%	64.35%	
Standard Deviation	0.2%	0.6%	0.1%	1%	0%	0.1%	0.6%	0.2%	0.1%	0.2%	
Blender - Pabellon	141.82	77.28	106.31	67.02	94.14	57.65	230.70	120.63	87.04	75.30	
Barcelona -											
CPU-Only (sec)											
Normalized	40.65%	74.6%	54.23%	86.02%	61.24%	100%	24.99%	47.79%	66.23%	76.56%	
Standard Deviation	0.2%	0.2%	0.2%	0.6%	0.1%	0.1%	0%	0.1%	0.2%	0.2%	
Timed Wasmer	53.747	53.553	61.923	63.017	61.948	62.986	69.538	66.924	58.493	44.721	
Compilation - Time											
To Compile (sec)											
Normalized	83.21%	83.51%	72.22%	70.97%	72.19%	71%	64.31%	66.82%	76.46%	100%	
Standard Deviation							0.1%	1.6%	0.2%	1.3%	
Zstd Compression -	2317	3256	2781	2679	2836	2747	969.0	1271	1962	2572	
8 - Compression Speed (MB/s)											
Normalized	71.15%	100%	85.42%	82.29%	87.1%	84.37%	29.76%	39.05%	60.25%	79%	
Standard Deviation	2.1%	6.6%	0.9%	5.7%	1.5%	4.5%	0.9%	1.3%	3.5%	5.4%	
Zstd Compression -	4019	3947	3767	3662		3546	2678	3011	3249		
8 - D.S (MB/s)											
Normalized	100%	98.22%	93.74%	91.12%		88.23%		66.65%	74.93%	80.84%	
Standard Deviation	0.3%	1.9%		2%		2.1%		0.3%	0.8%	5.9%	
Zstd Compression -	97.5	82.4	86.0	81.9	86.3	79.9	75.4	77.4	85.2	72.5	
19 - Compression Speed (MB/s)											
Normalized	100%	84.51%	88.21%	84%	88.51%	81.95%	77.33%	79.38%	87.38%	74.36%	
Standard Deviation	1.7%	7.1%	2.2%	5%	0.6%	6.8%	4.5%	0.2%	1.7%	8.1%	
Zstd Compression -	3755	3690	3441	3420	3262	3260	2833	2318	2723	3306	
19 - D.S (MB/s)											
Normalized	100%	98.25%	91.64%	91.06%	86.87%	86.8%	75.44%	61.73%	72.5%	88.03%	
Standard Deviation	2.6%	2.9%	1.4%	1.9%	0.5%	1.2%	0.7%	0.5%	0.3%	0.9%	
Zstd Compression -	1012	942.1	819.7	788.6	862.7	847.4	754.3	715.8	949.5	832.5	
8, Long Mode - Compression Speed (MB/s)											
Normalized	100%	93.13%	81.03%	77.96%	85.28%	83.77%	74.57%	70.76%	93.86%	82.3%	
Standard Deviation	0.1%	7%	2.3%	4.8%	1.8%	2%	1%	2%	0.7%	2.4%	
Zstd Compression -		4255	3989	3959	3844	3756	3420	2801	3200	3678	
8, Long Mode - D.S (MB/s)											
Normalized	100%	93.75%	93.04%	90.33%	88.27%	80.38%	65.84%	75.21%	86.44%		
Standard Deviation	3.9%	1.6%	1.7%	2.1%	1.3%	0.3%	0.7%		0.2%		

Initial Intel Xeon Platinum 8380 2P Benchmarks

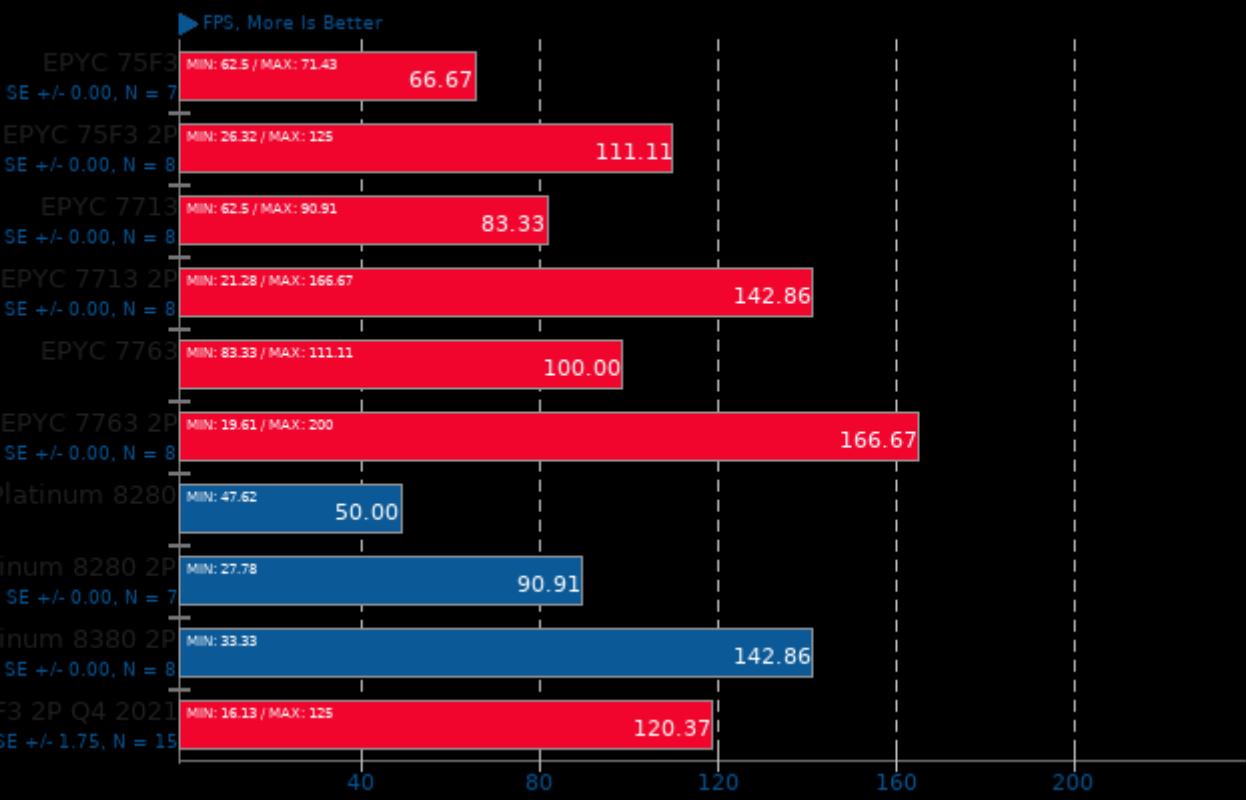
Zstd Compression -	50.7	38.6	47.7	38.2	47.6	37.9	44.8	42.8	47.6	38.5
19, Long Mode -										
Compression Speed (MB/s)										
Normalized	100%	76.13%	94.08%	75.35%	93.89%	74.75%	88.36%	84.42%	93.89%	75.94%
Standard Deviation	0.8%	6.4%	0.8%	11.3%	1%	8.5%	0.6%	1.2%	2.3%	4.8%
Zstd Compression -	3724	3781	3426	3437	3368	3318	2880	2350	2764	3270
19, Long Mode -										
D.S (MB/s)										
Normalized	98.51%	100%	90.63%	90.91%	89.09%	87.77%	76.19%	62.16%	73.11%	86.51%
Standard Deviation	0.6%	1%	1%	1.3%	1.6%	1.7%	0.2%	0.2%	0.3%	0.7%
Timed Linux Kernel	32.650	22.024	28.592	21.387	26.345	20.058		28.534	22.580	
Compilation - Time To Compile (sec)										
Normalized	61.43%	91.07%	70.15%	93.79%	76.14%	100%		70.3%	88.83%	
Standard Deviation	2.4%	2.4%	2.4%	2.6%	2.5%	2.8%		2.3%	2.3%	0.021
LuxCoreRender -										
DLSC (M samples/sec/Watt)										0.022
LuxCoreRender -										
R.C.a.P (M samples/sec/Watt)										0.077
ACES DGEMM -										
S.F.P.R (GFLOP/s/Watt)										
GROMACS - Water Benchmark (Ns/Day/Watt)										0.018
Kvazaar -										0.103
Bosphorus 4K -										
Very Fast										
LibRaw - P.P.B (Mpix/sec/Watt)										0.145
Google SynthMark -										2.948
VoiceMark_100 (Voices/Watt)										
OpenVKL -										2.875
vklBenchmark (Items / Sec/Watt)										
Intel Open Image Denoise - Memorial (Images / Sec/Watt)										0.223
Algebraic Multi-Grid Benchmark (Figure Of Merit/Watt)										4508384

GROMACS -	0.019
water_GMX50_bare (Ns/Day/Watt)	
JPEG XL - JPEG - 8 (MP/s/Watt)	0.135
dav1d - Summer Nature 4K (FPS/Watt)	2.154
Zstd Compression -	12.057
8 - D.S (MB/s/Watt)	
Zstd Compression -	10.599
19 - D.S (MB/s/Watt)	
Zstd Compression -	13.76
8, Long Mode - D.S (MB/s/Watt)	
Zstd Compression -	11.676
19, Long Mode - D.S (MB/s/Watt)	

Initial Intel Xeon Platinum 8380 2P Benchmarks

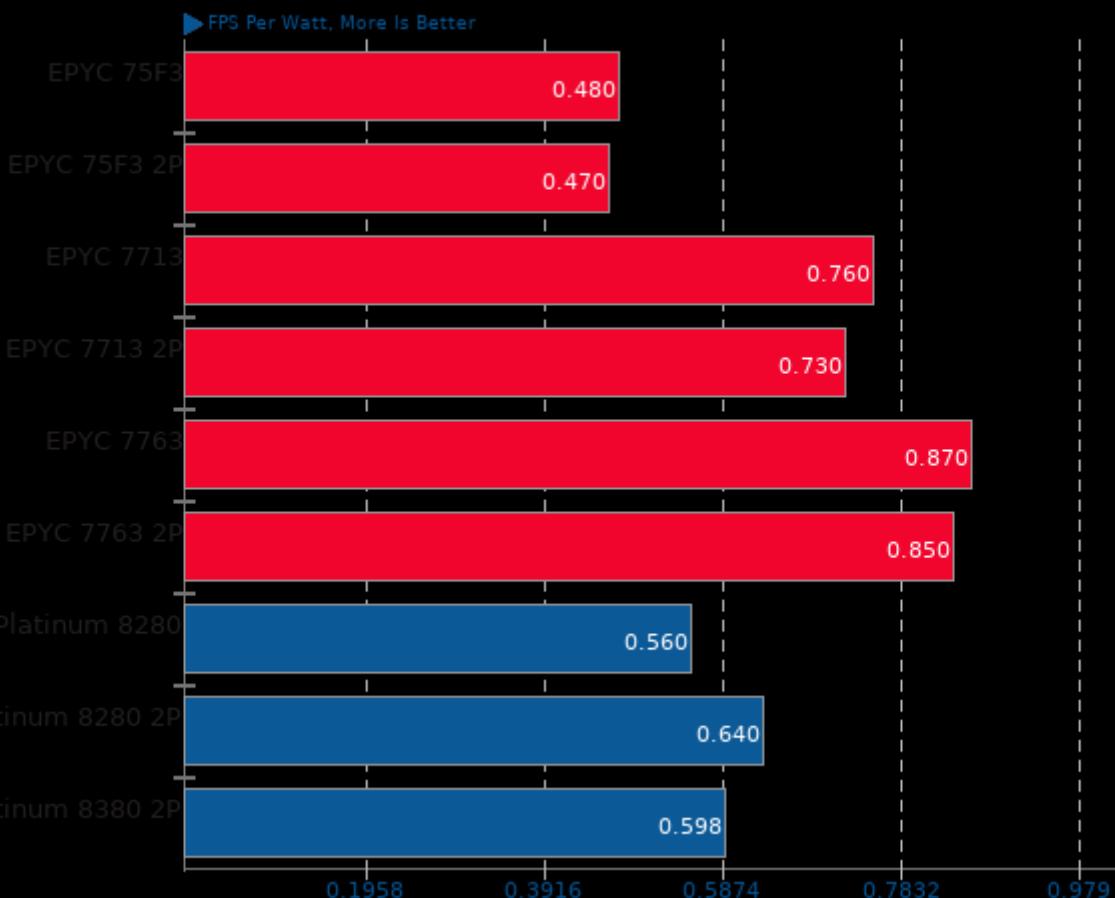
OSPray 1.8.5

Demo: NASA Streamlines - Renderer: SciVis



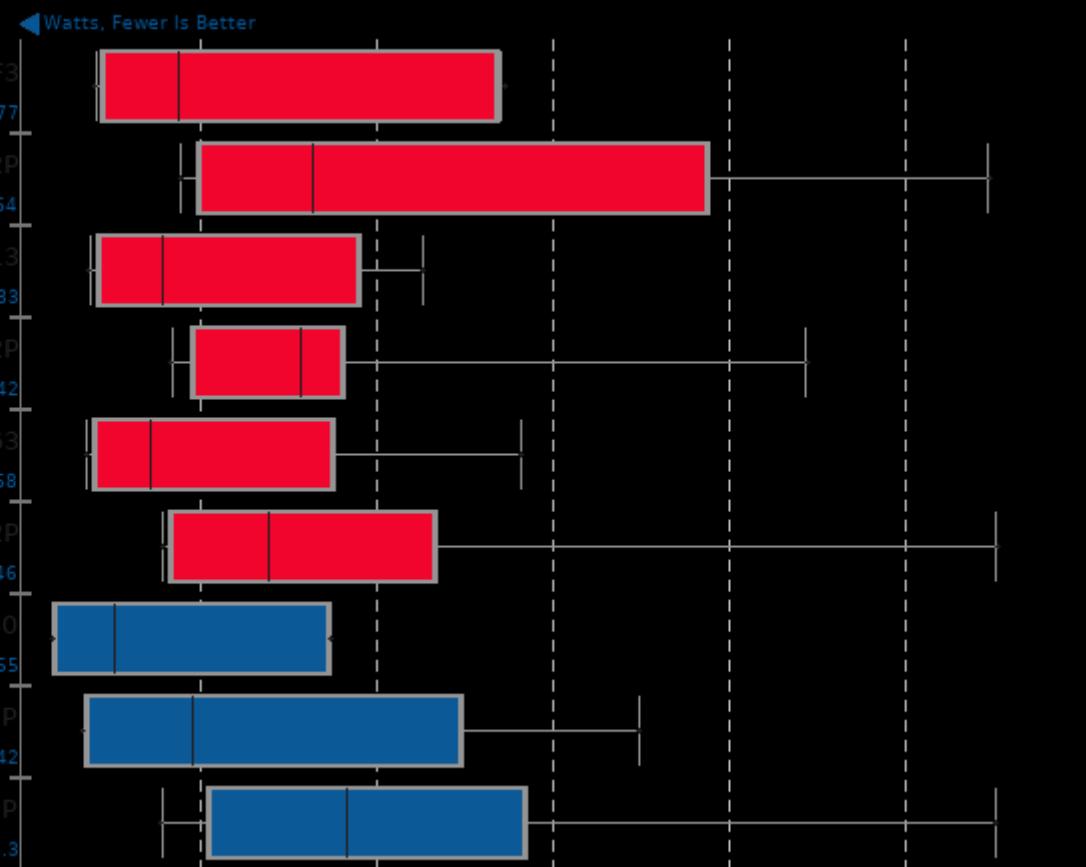
OSPray 1.8.5

Demo: NASA Streamlines - Renderer: SciVis



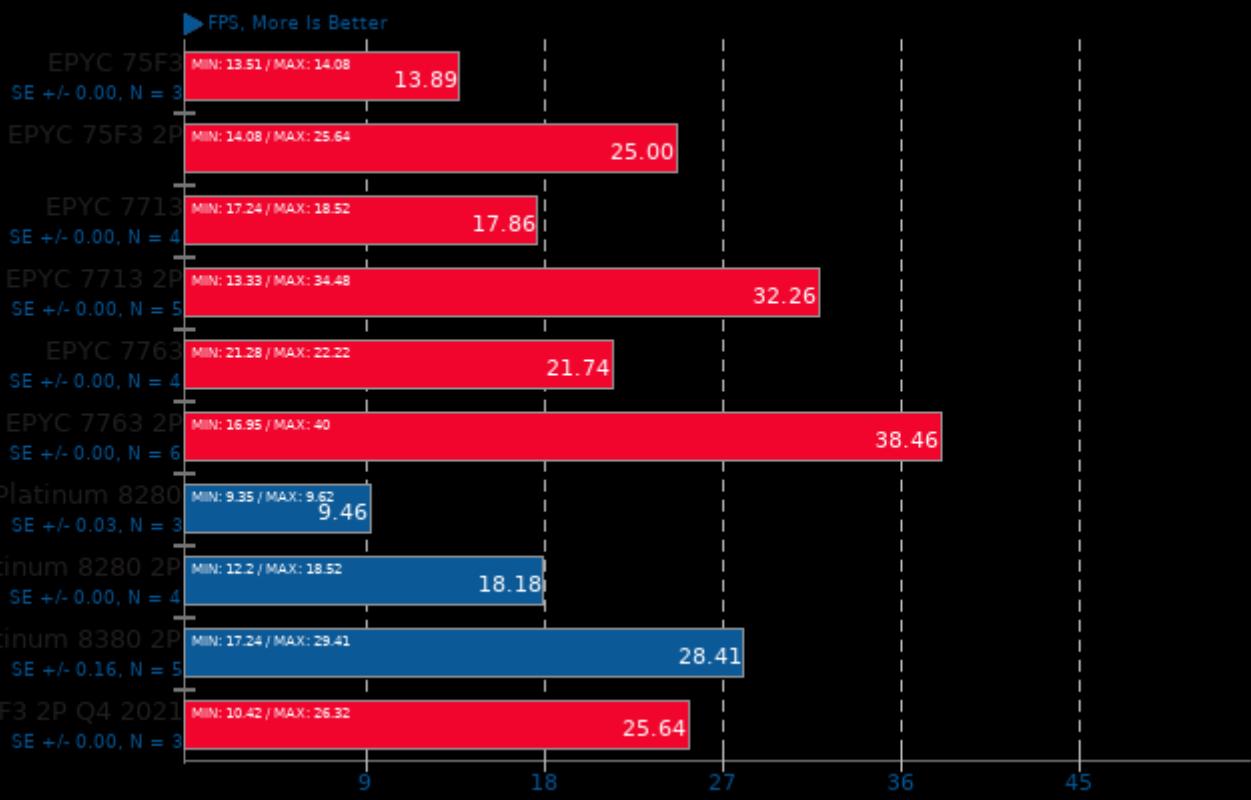
OSPray 1.8.5

CPU Power Consumption Monitor



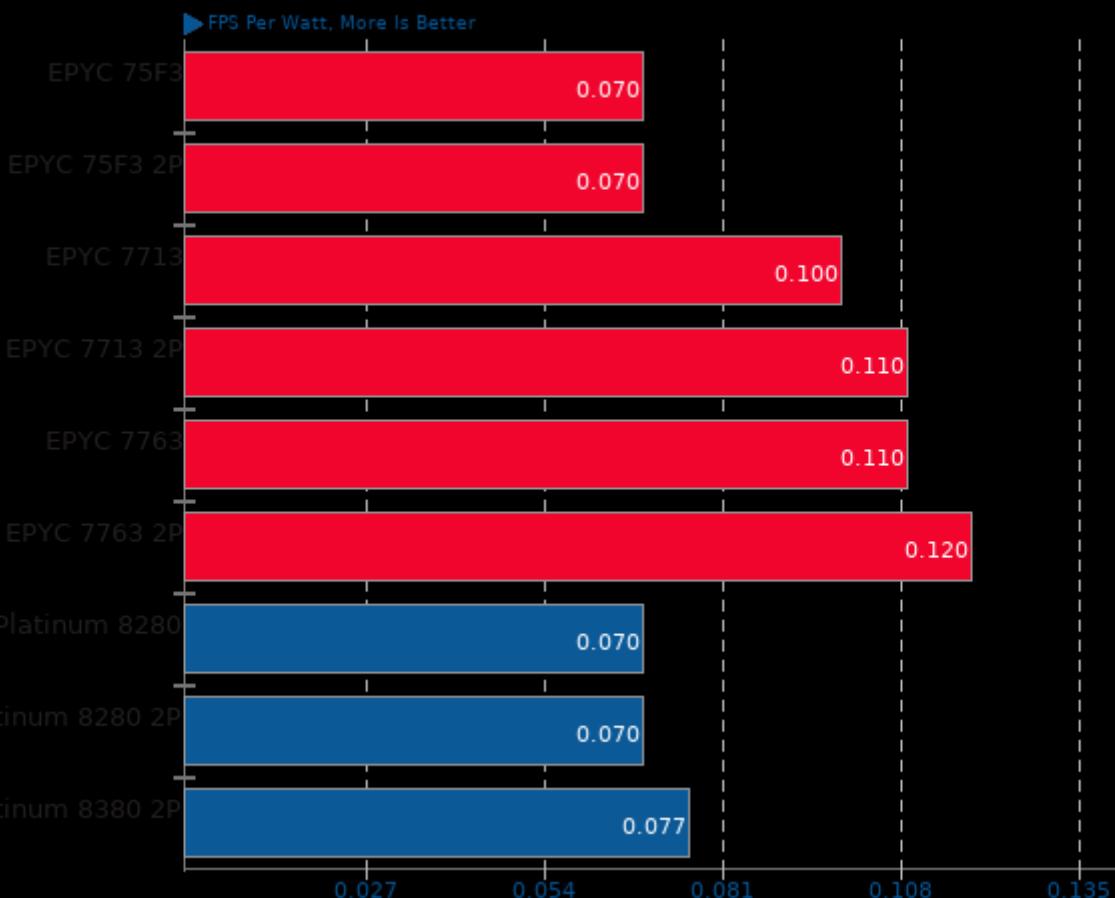
OSPray 1.8.5

Demo: NASA Streamlines - Renderer: Path Tracer



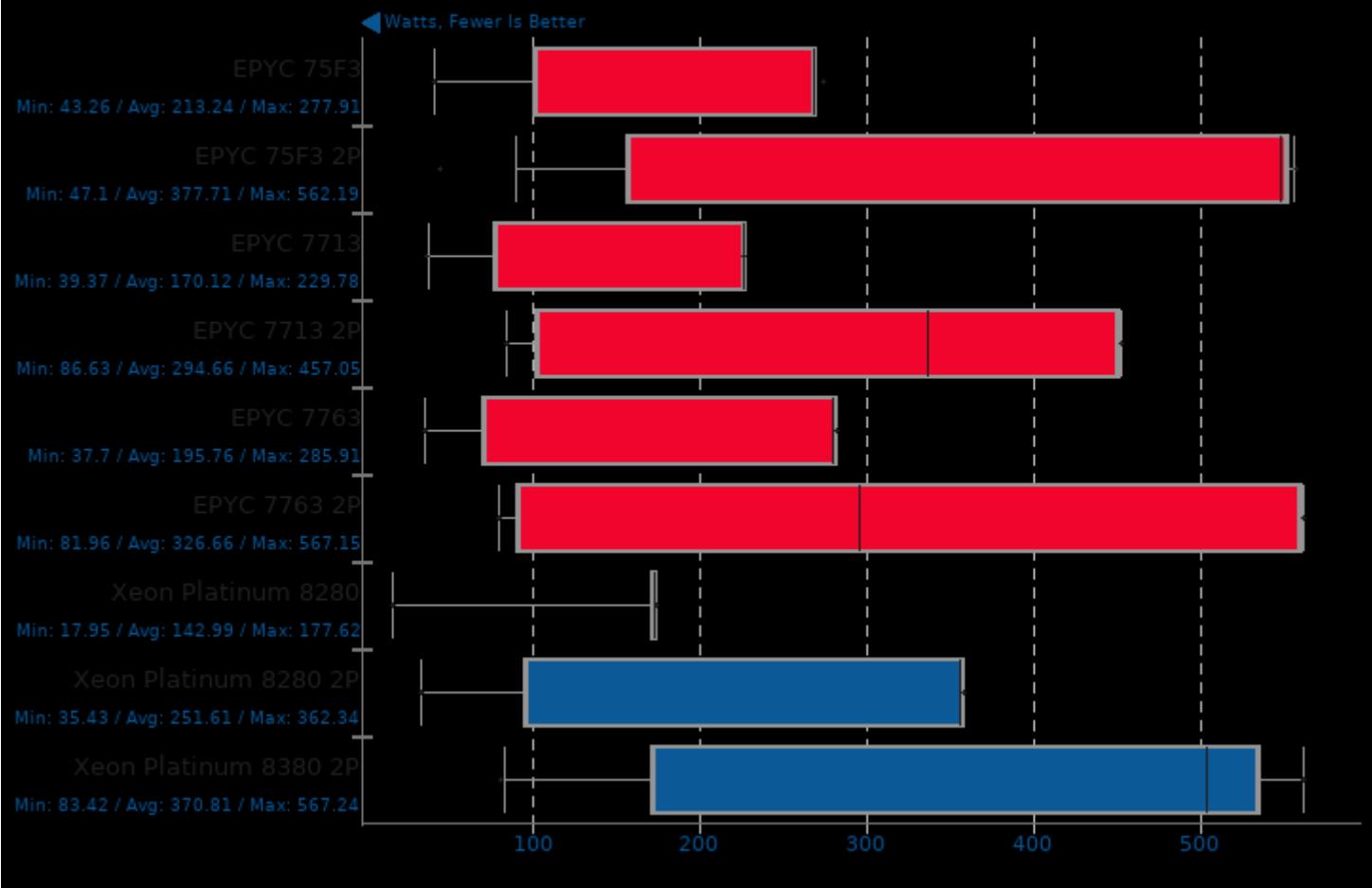
OSPray 1.8.5

Demo: NASA Streamlines - Renderer: Path Tracer



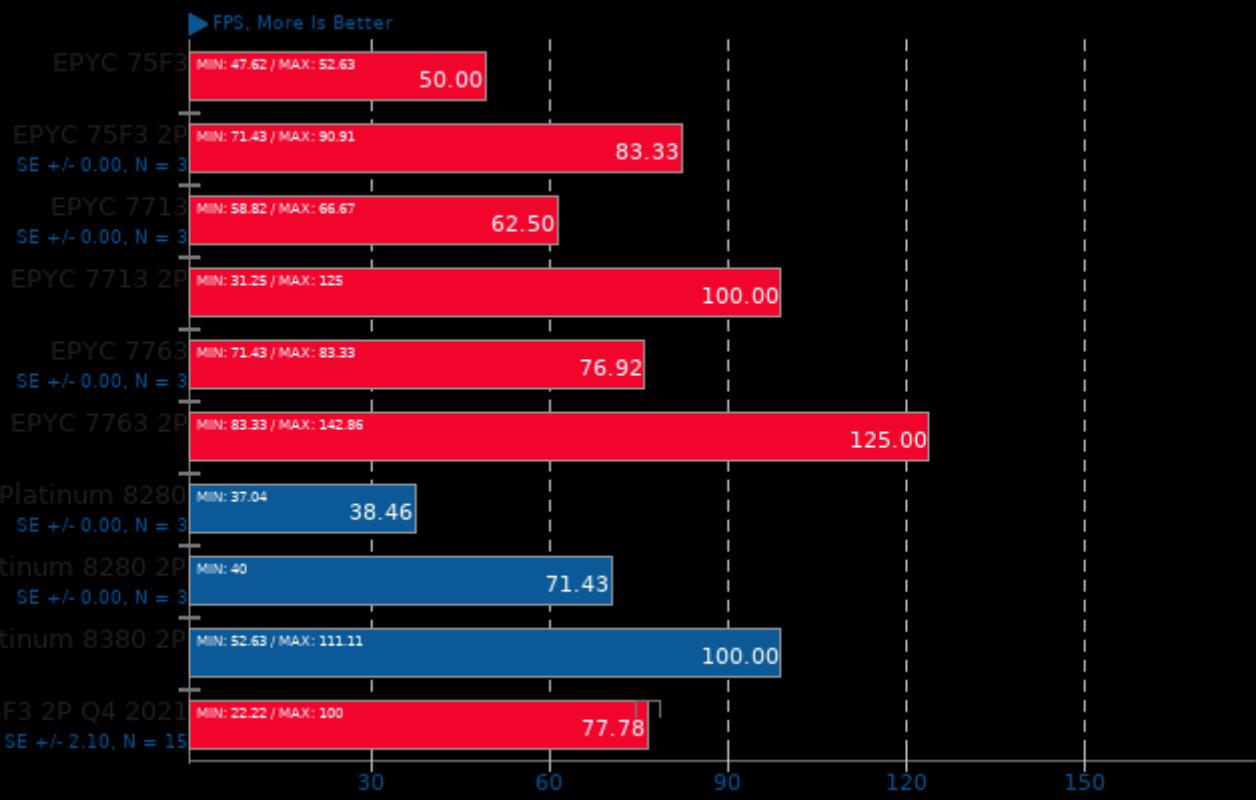
OSPray 1.8.5

CPU Power Consumption Monitor



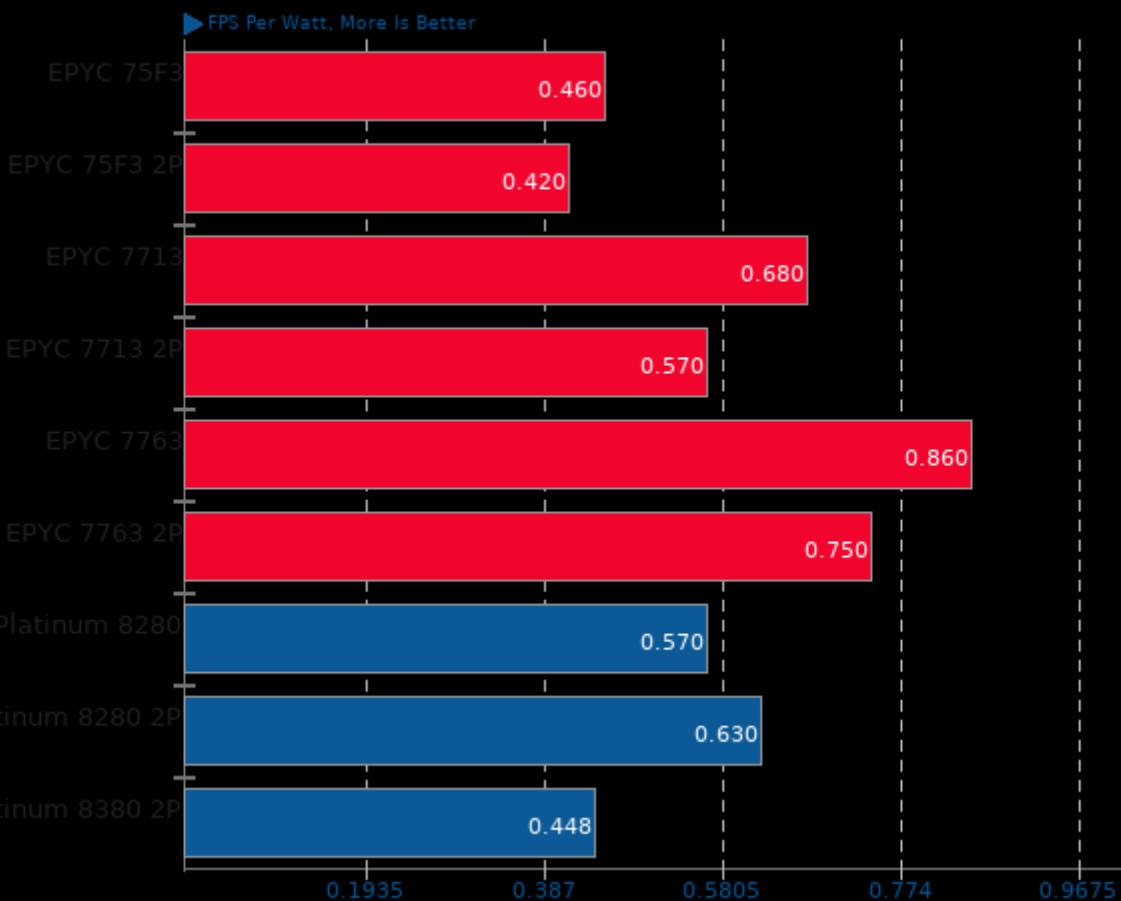
OSPray 1.8.5

Demo: San Miguel - Renderer: SciVis



OSPray 1.8.5

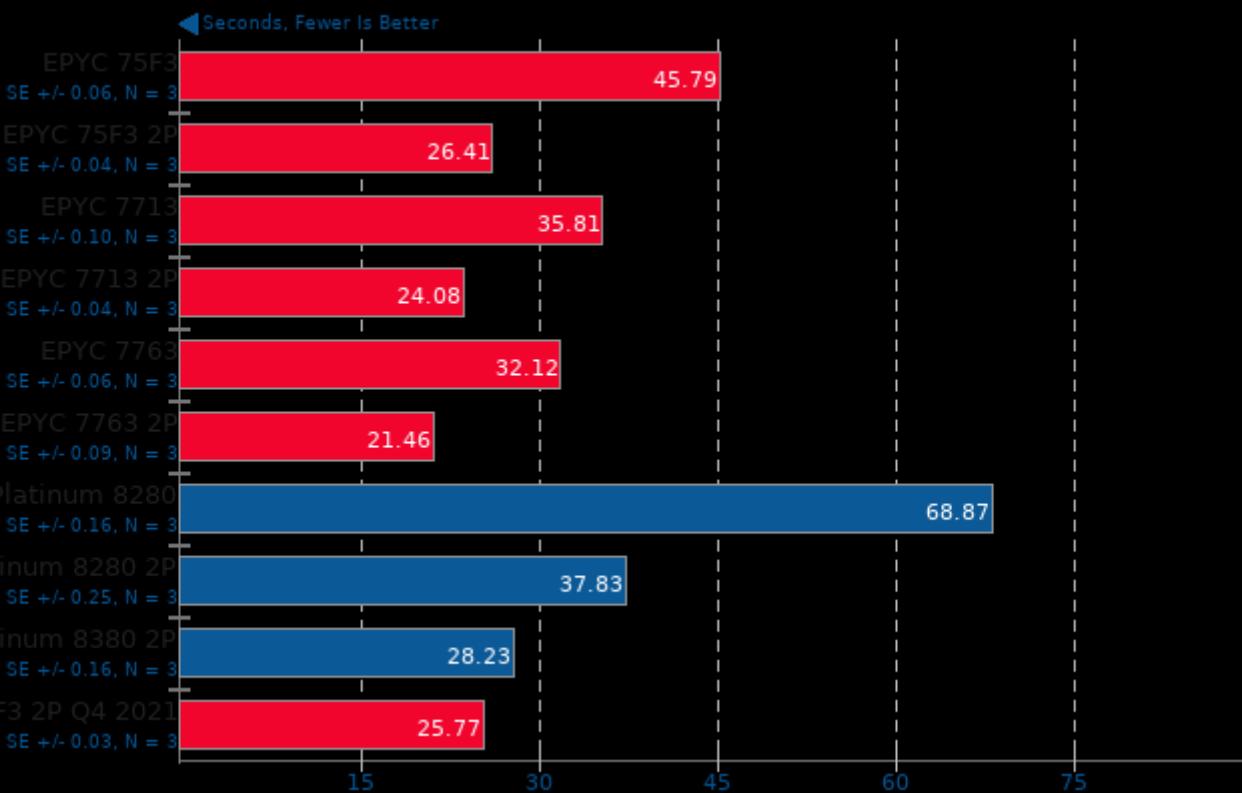
Demo: San Miguel - Renderer: SciVis



Initial Intel Xeon Platinum 8380 2P Benchmarks

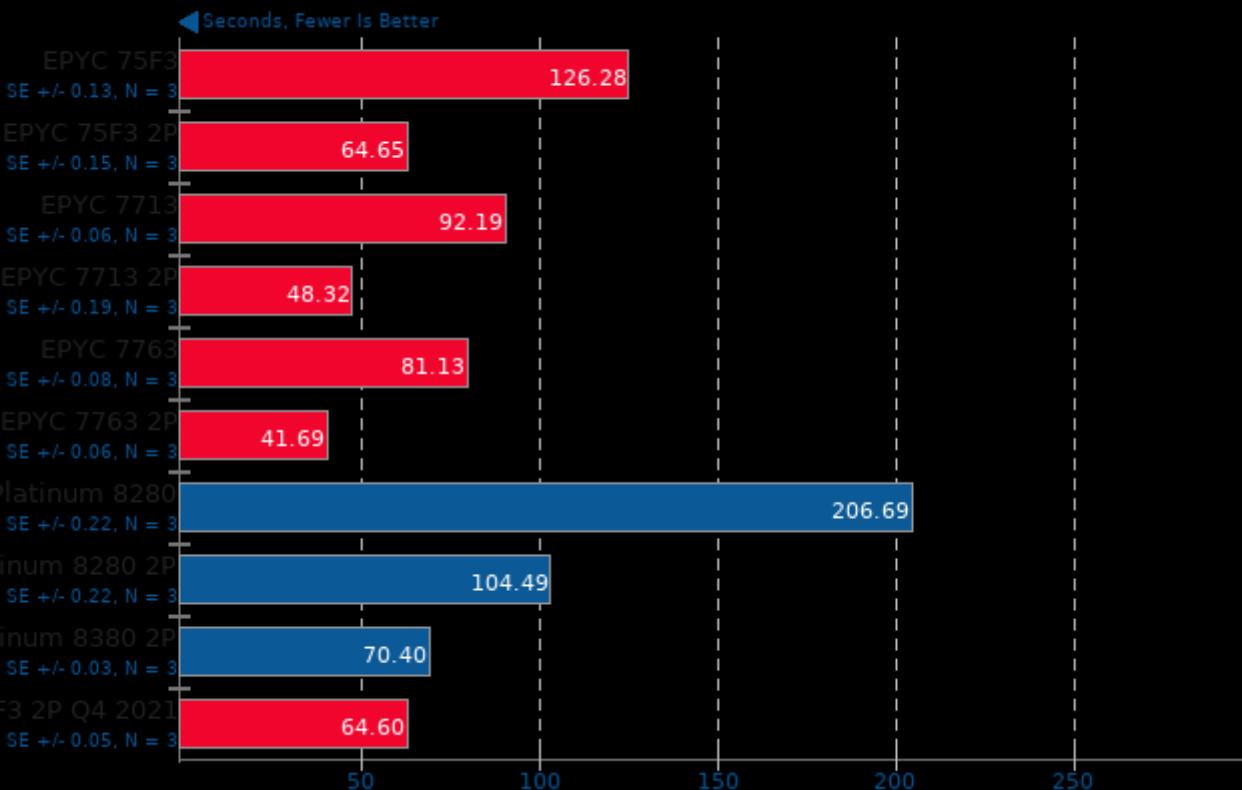
Blender 2.90

Blend File: BMW27 - Compute: CPU-Only



Blender 2.90

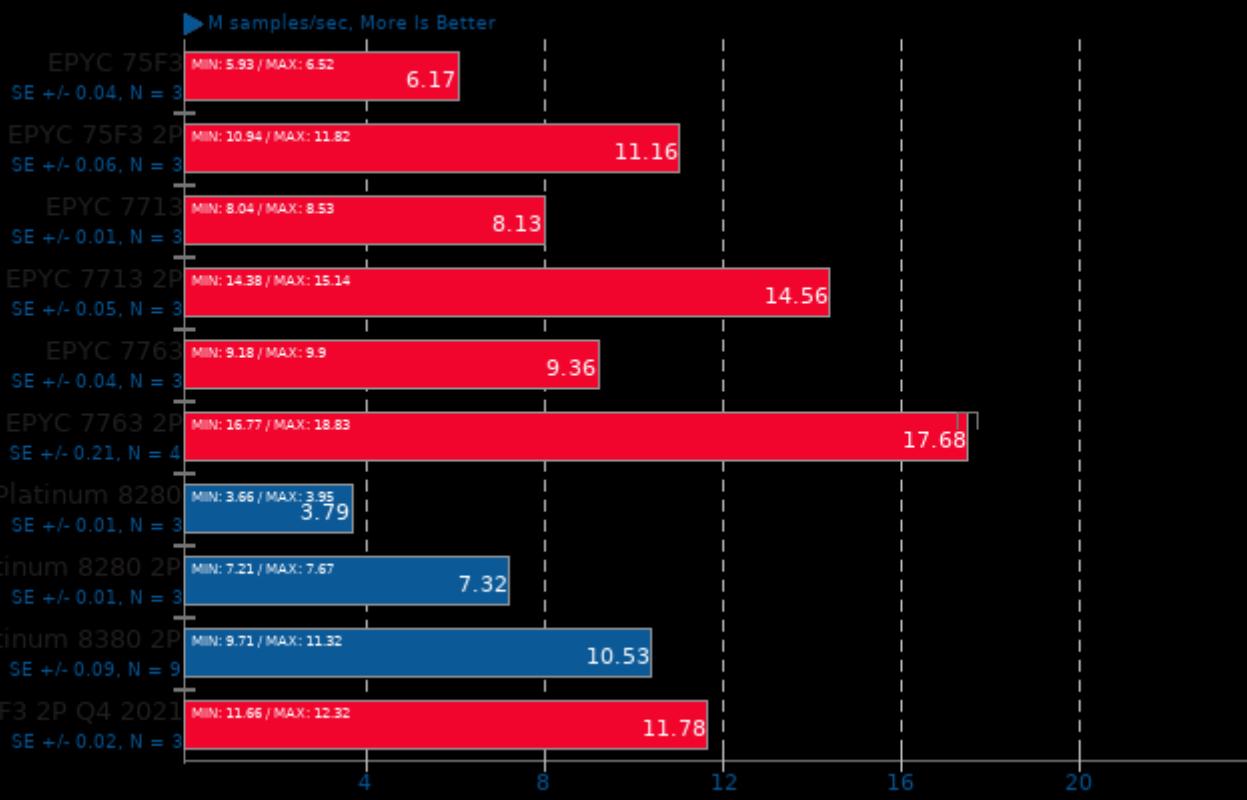
Blend File: Classroom - Compute: CPU-Only



Initial Intel Xeon Platinum 8380 2P Benchmarks

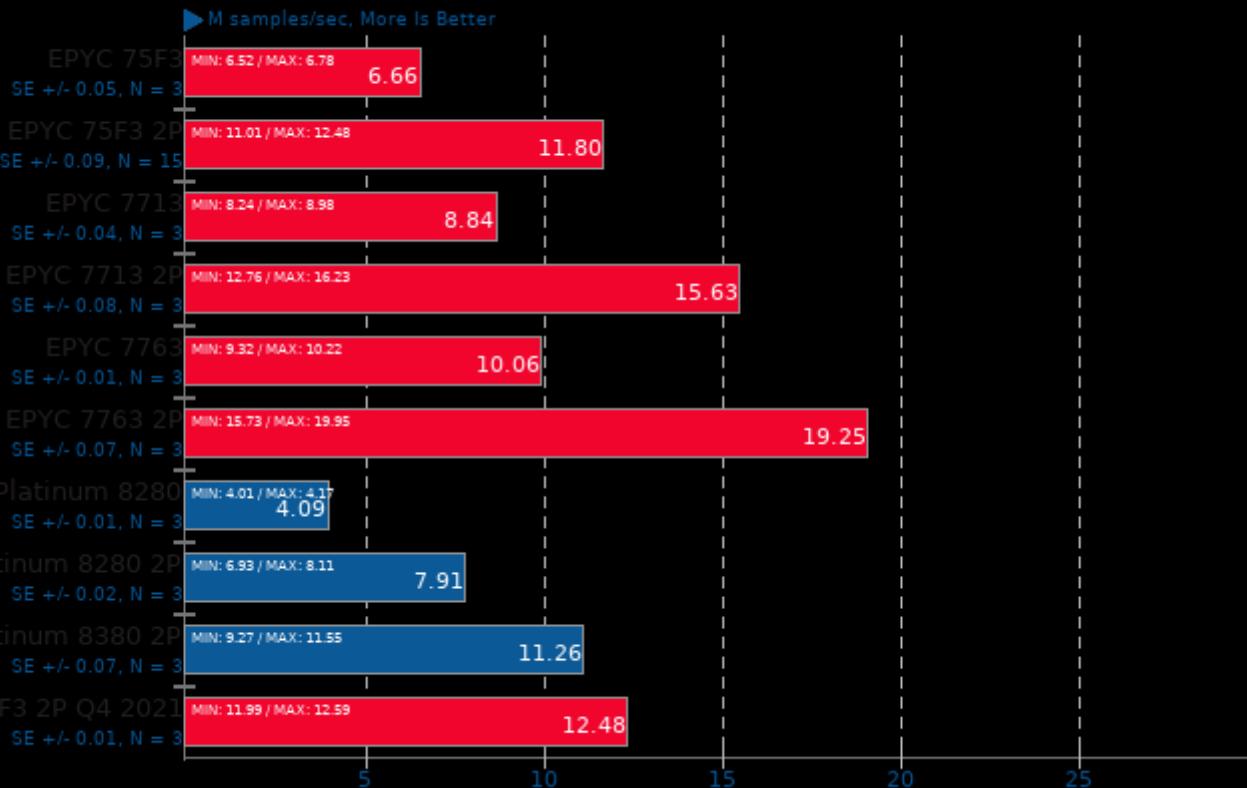
LuxCoreRender 2.3

Scene: DLSC



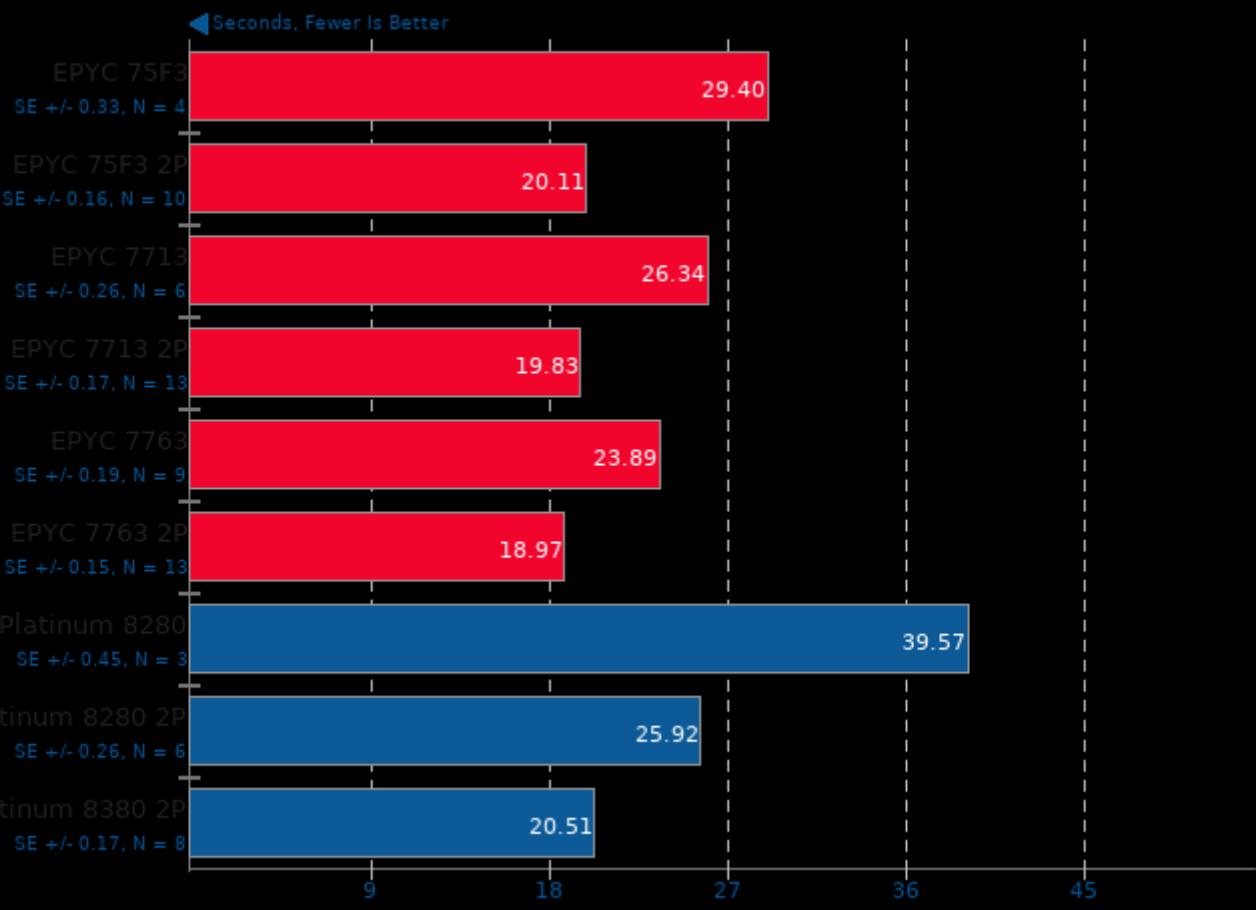
LuxCoreRender 2.3

Scene: Rainbow Colors and Prism



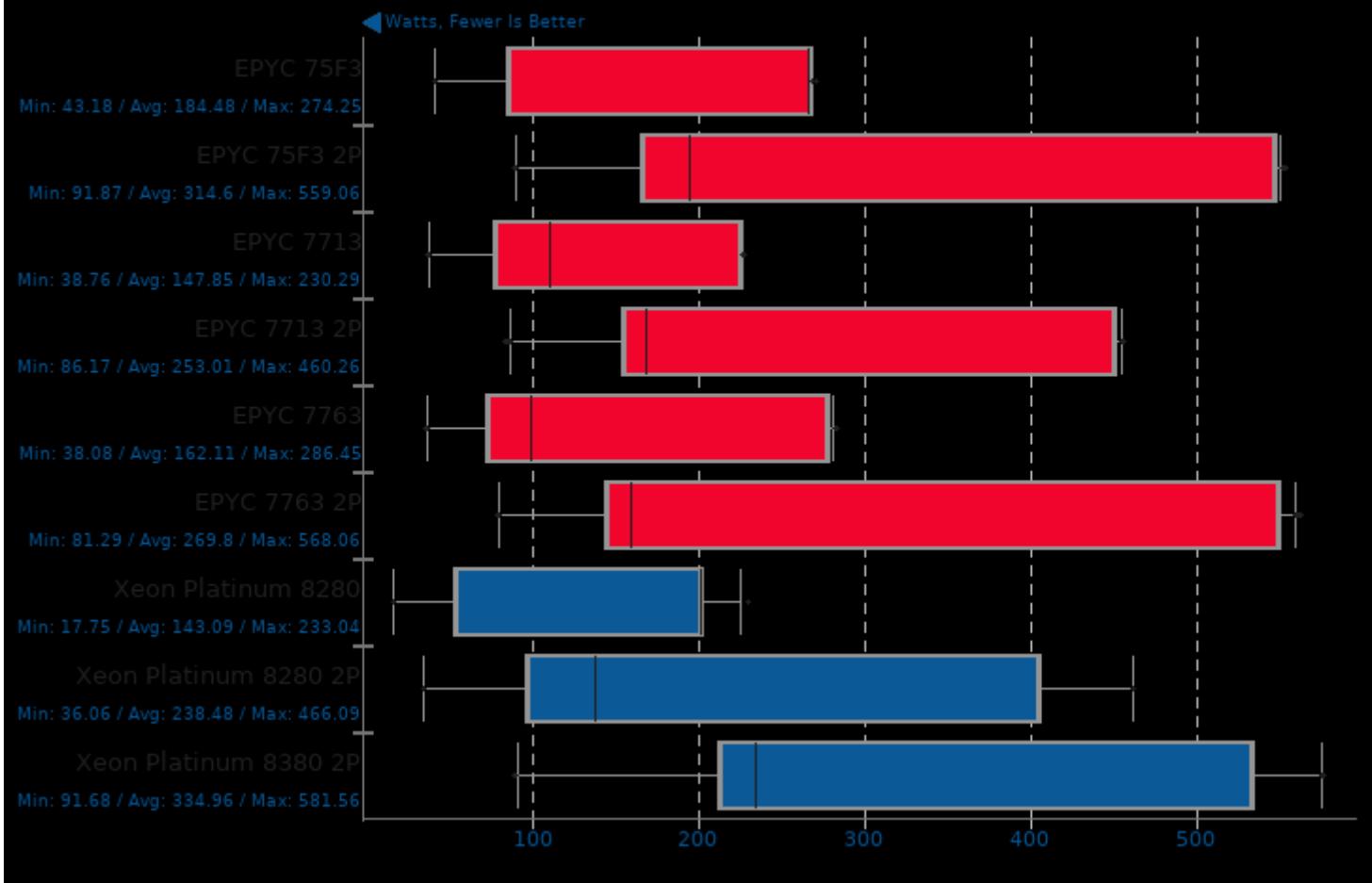
Timed Linux Kernel Compilation 5.4

Time To Compile



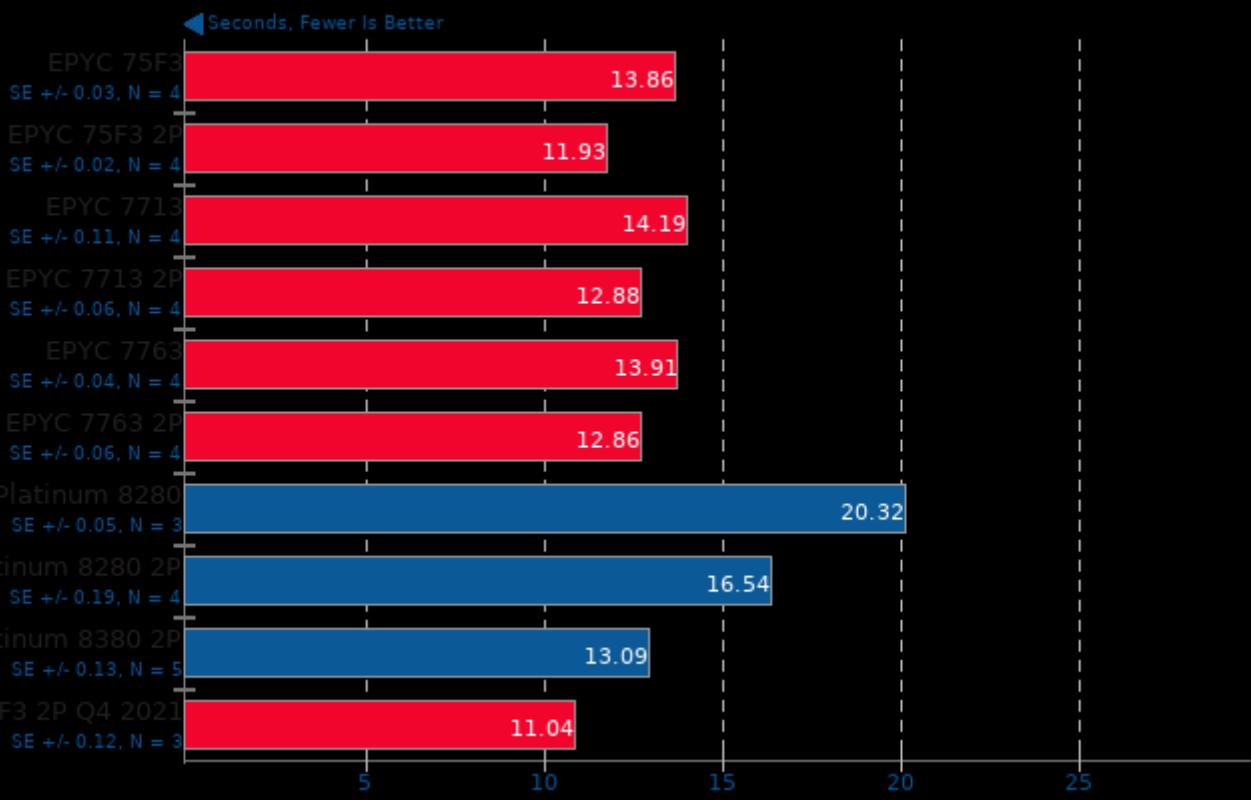
Timed Linux Kernel Compilation 5.4

CPU Power Consumption Monitor



Timed ImageMagick Compilation 6.9.0

Time To Compile



Timed LLVM Compilation 10.0

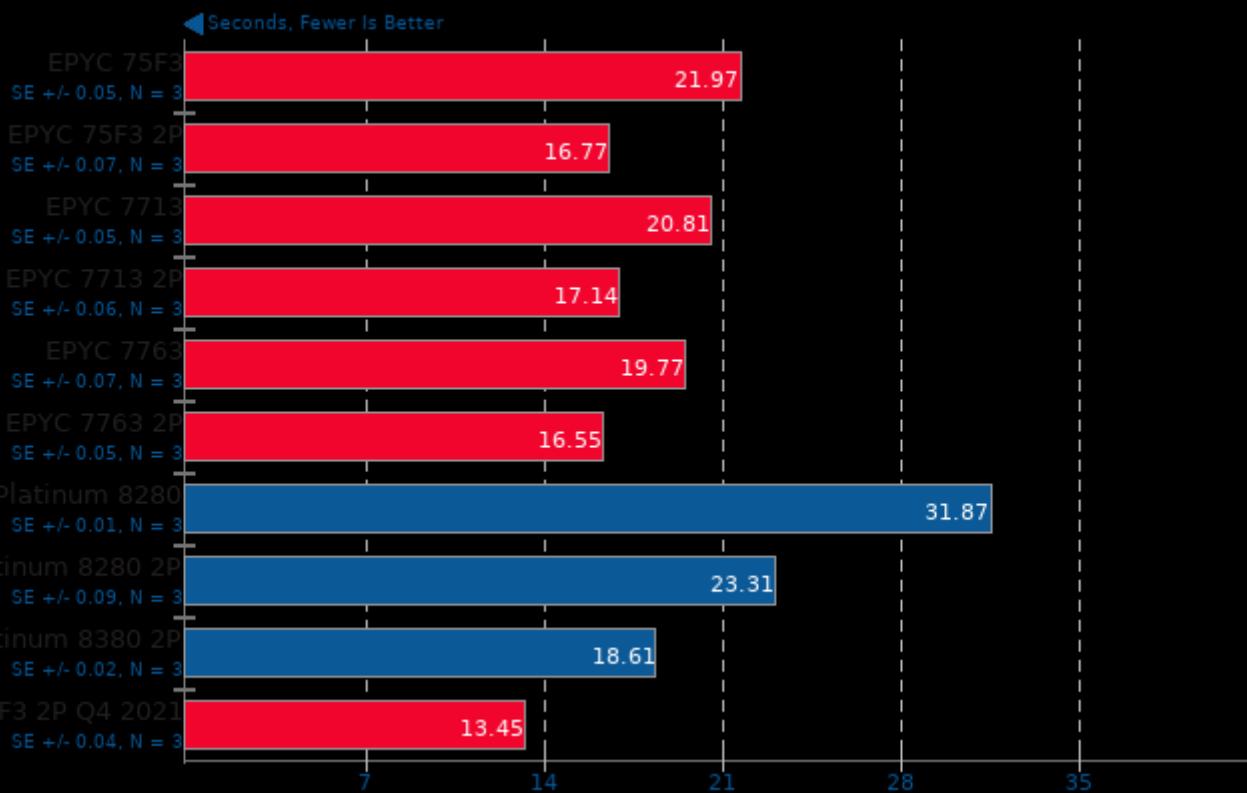
Time To Compile



Initial Intel Xeon Platinum 8380 2P Benchmarks

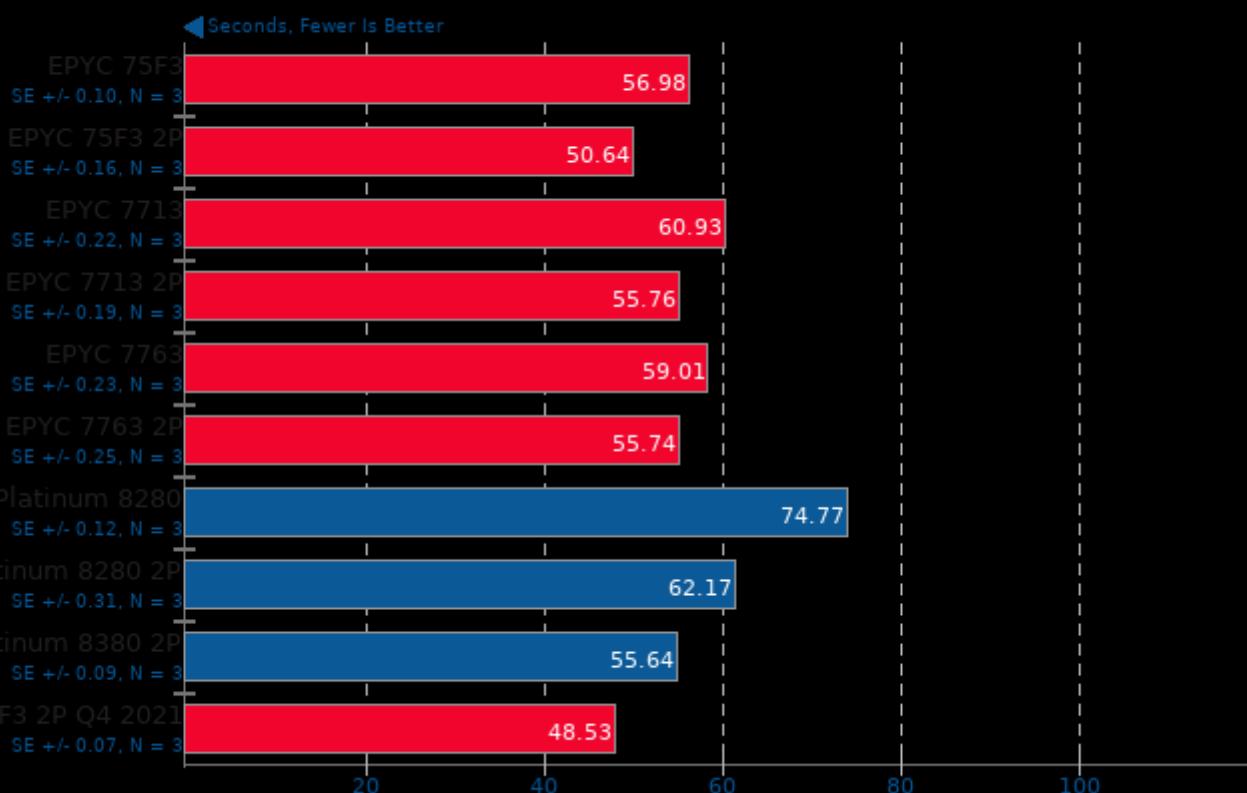
Timed FFmpeg Compilation 4.2.2

Time To Compile



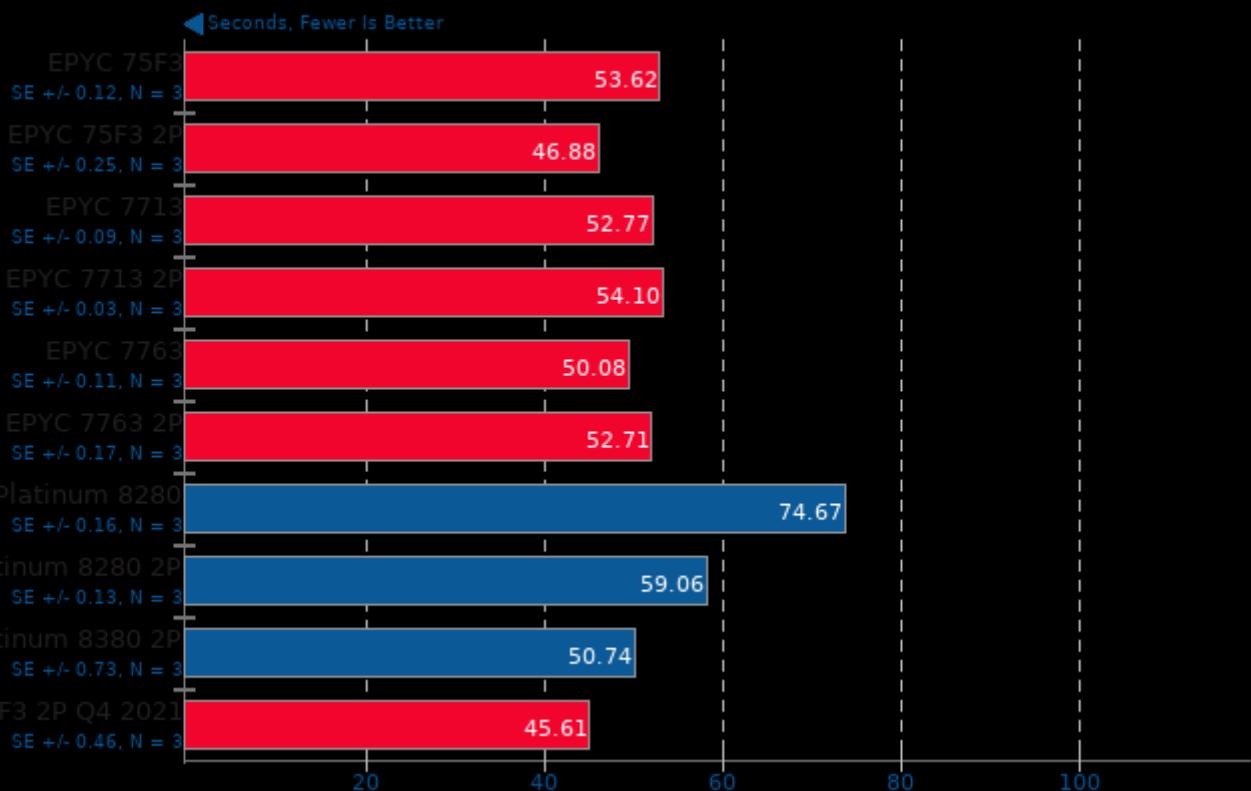
Build2 0.13

Time To Compile



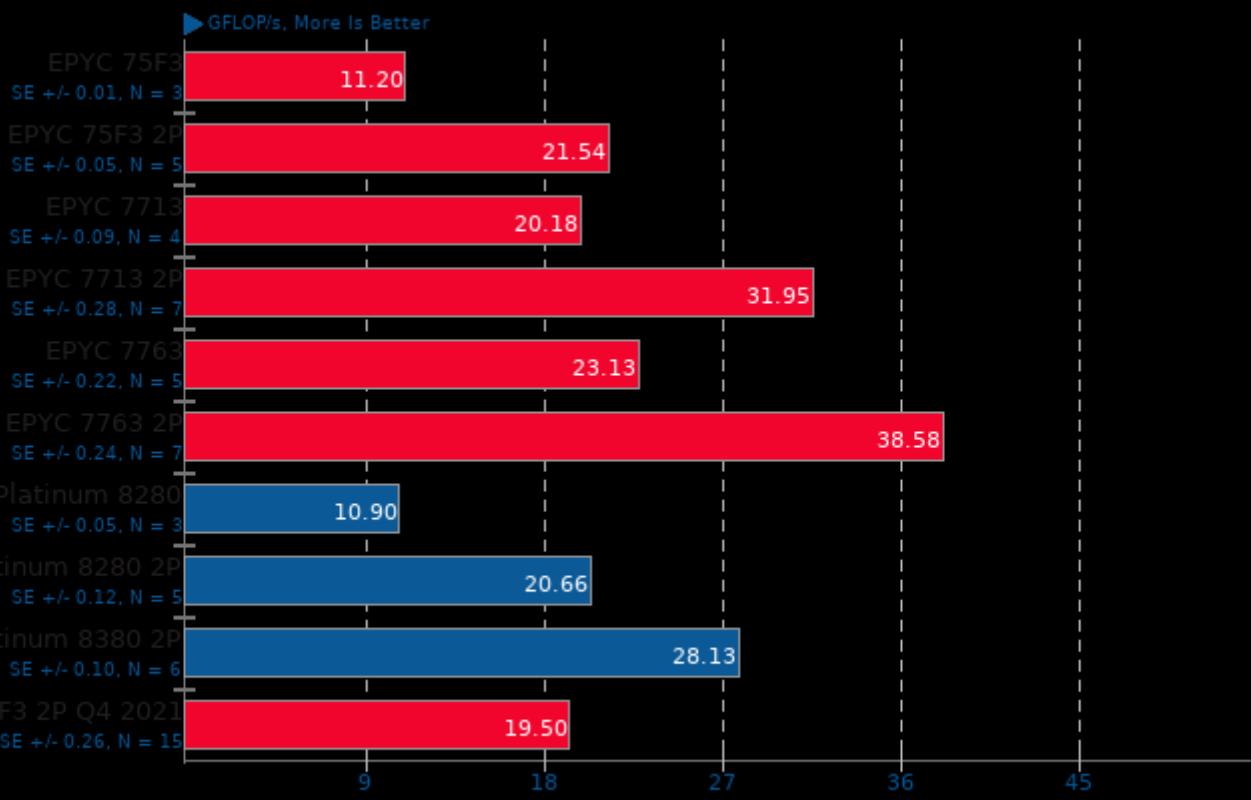
Timed Godot Game Engine Compilation 3.2.3

Time To Compile



ACES DGEMM 1.0

Sustained Floating-Point Rate



1. (CC) gcc options: -O3 -march=native -fopenmp

Initial Intel Xeon Platinum 8380 2P Benchmarks

FFTE 7.0

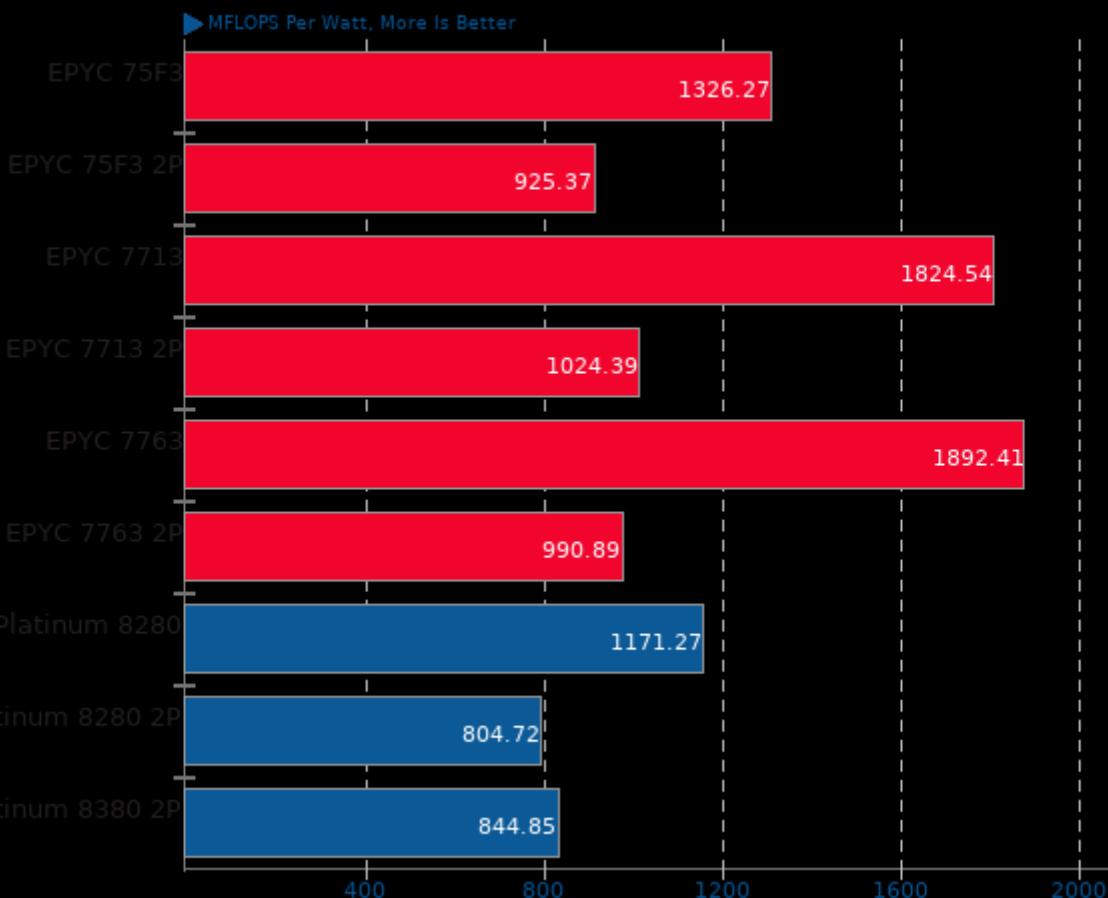
N=256, 3D Complex FFT Routine



1. (F9X) gfortran options: -O3 -fomit-frame-pointer -fopenmp

FFTE 7.0

N=256, 3D Complex FFT Routine



High Performance Conjugate Gradient 3.1



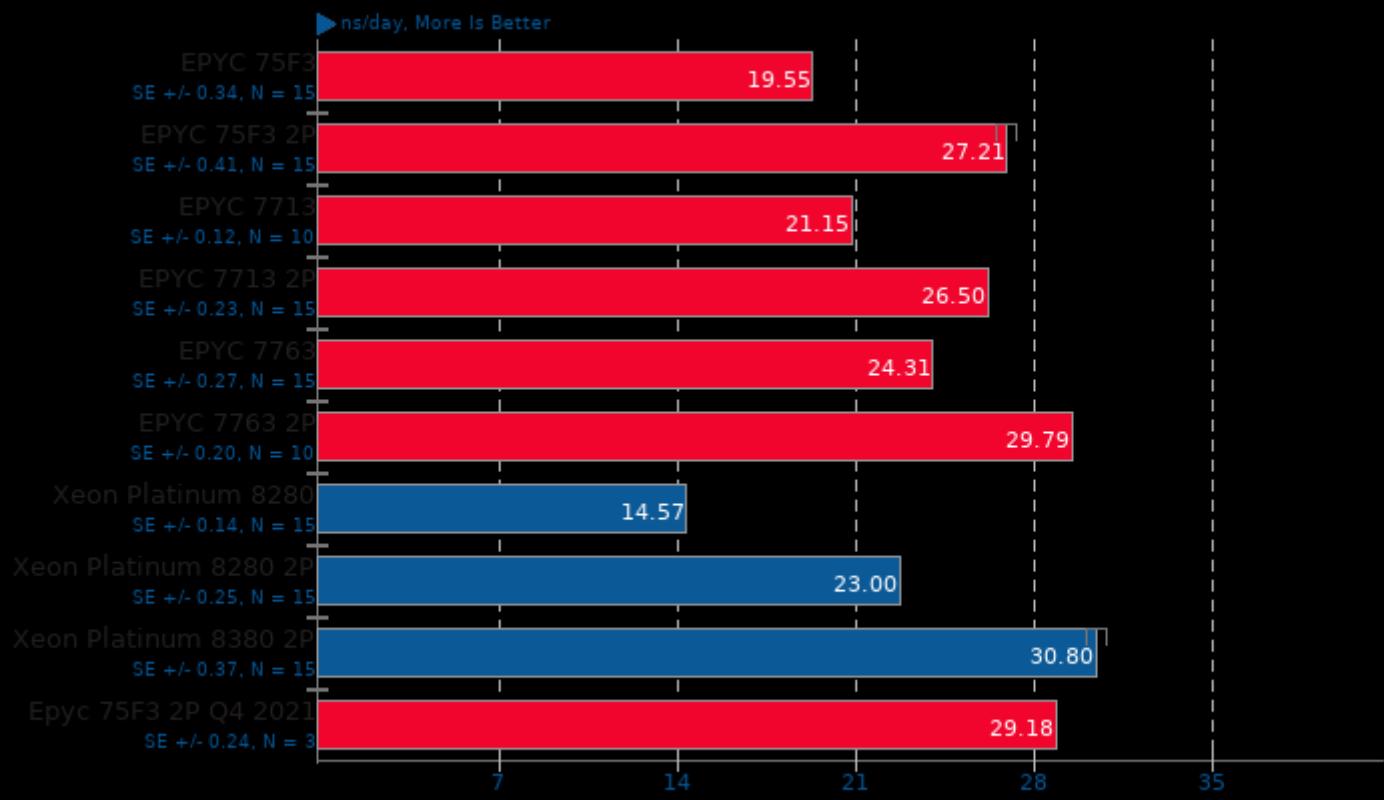
1. (CXX) g++ options: -O3 -ffast-math -ftree-vectorize -pthread -lmpi_cxx -lmpi

High Performance Conjugate Gradient 3.1



LAMMPS Molecular Dynamics Simulator 29Oct2020

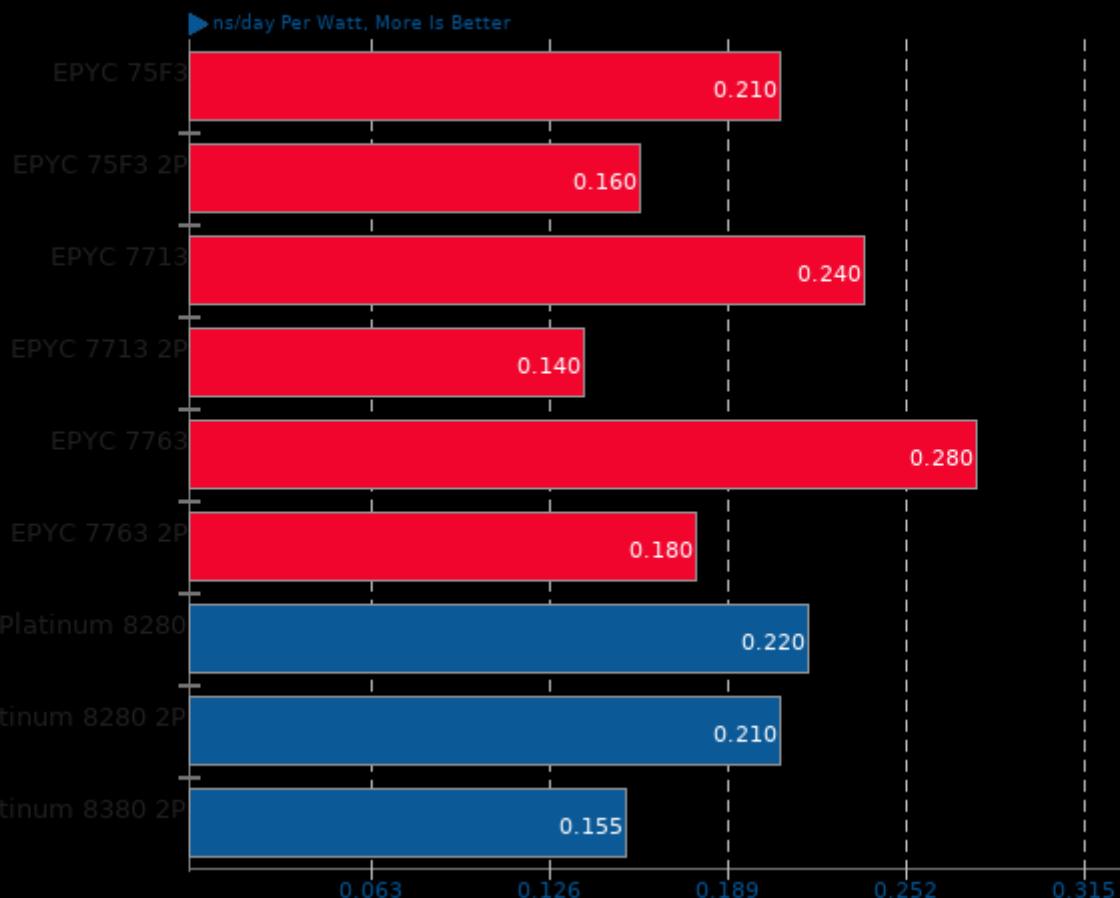
Model: Rhodopsin Protein



1. (CXX) g++ options: -O3 -pthread -lm

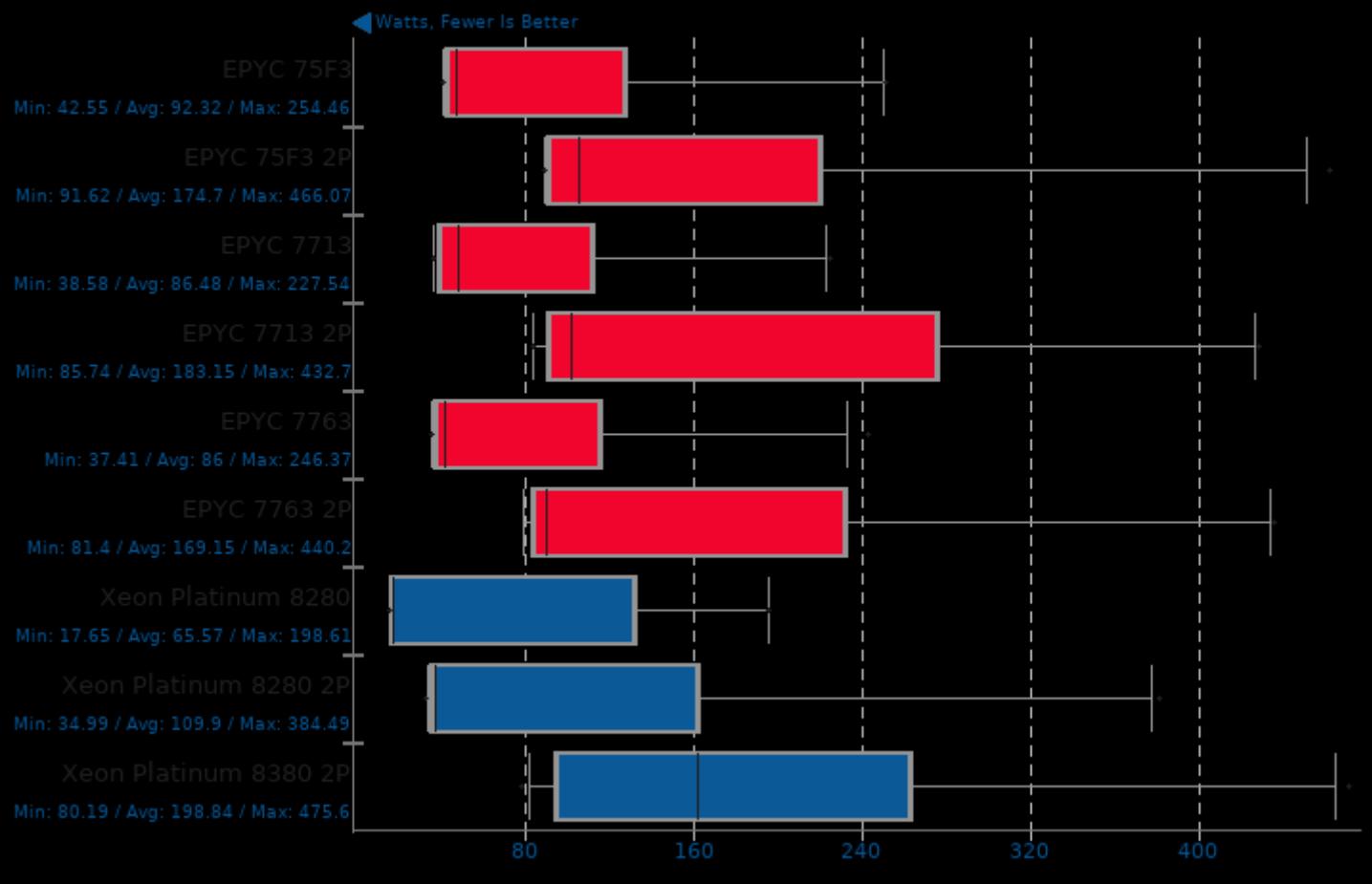
LAMMPS Molecular Dynamics Simulator 29Oct2020

Model: Rhodopsin Protein



LAMMPS Molecular Dynamics Simulator 29Oct2020

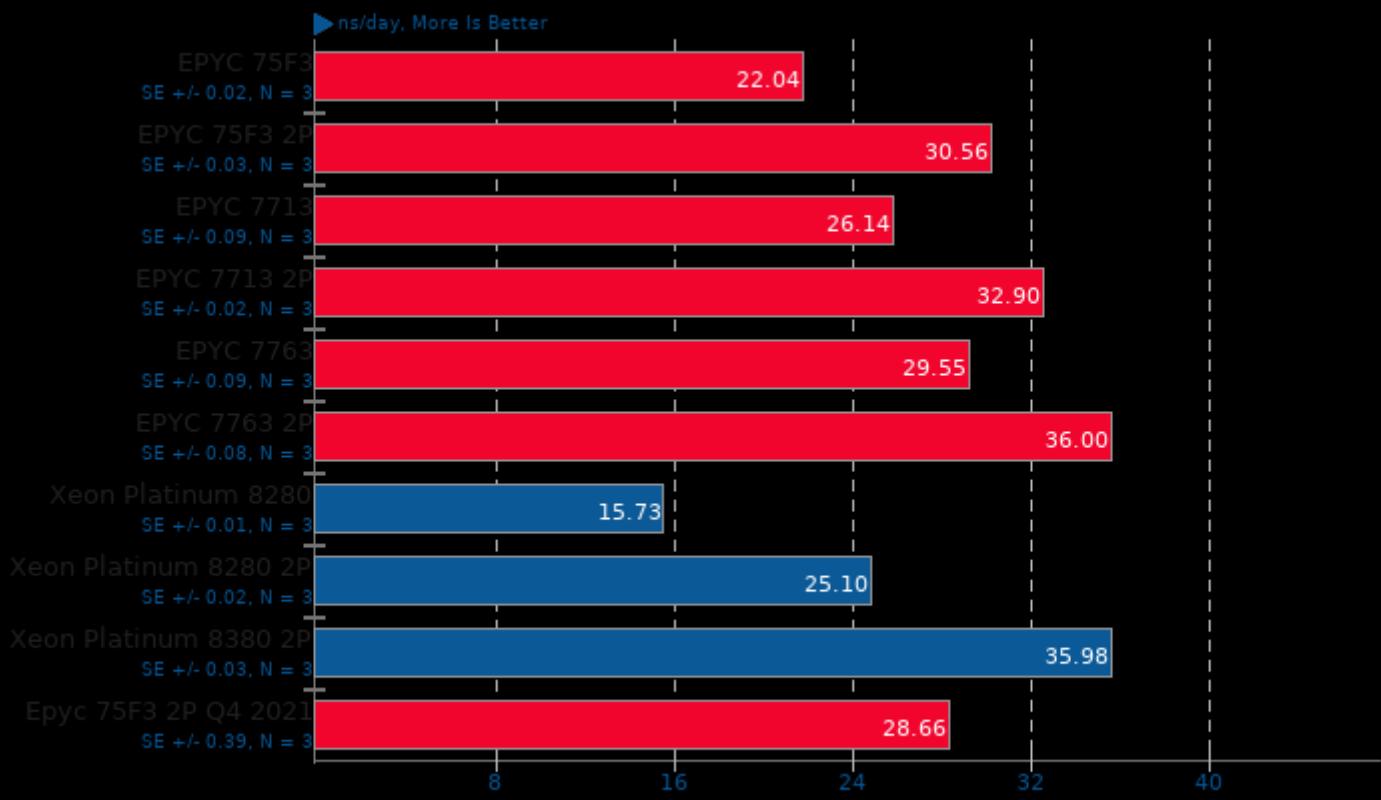
CPU Power Consumption Monitor



Initial Intel Xeon Platinum 8380 2P Benchmarks

LAMMPS Molecular Dynamics Simulator 29Oct2020

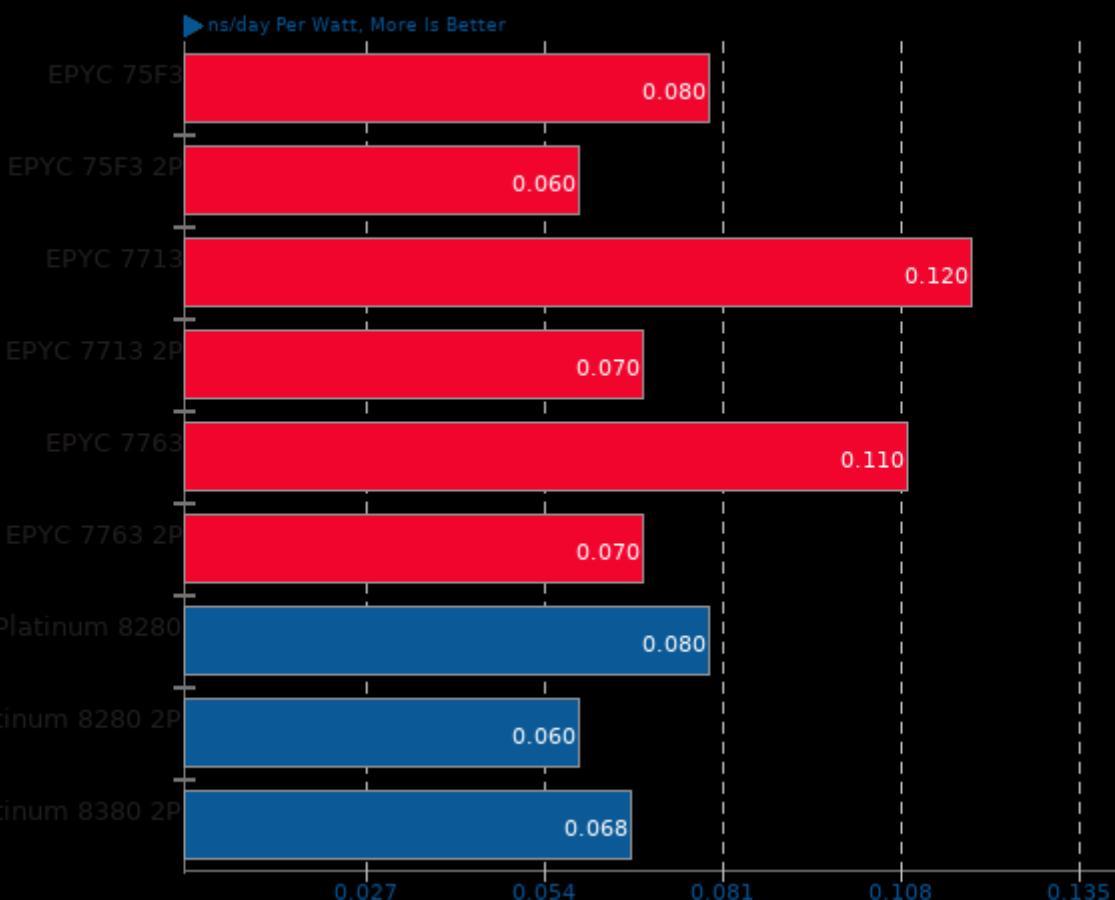
Model: 20k Atoms



1. (CXX) g++ options: -O3 -pthread -lm

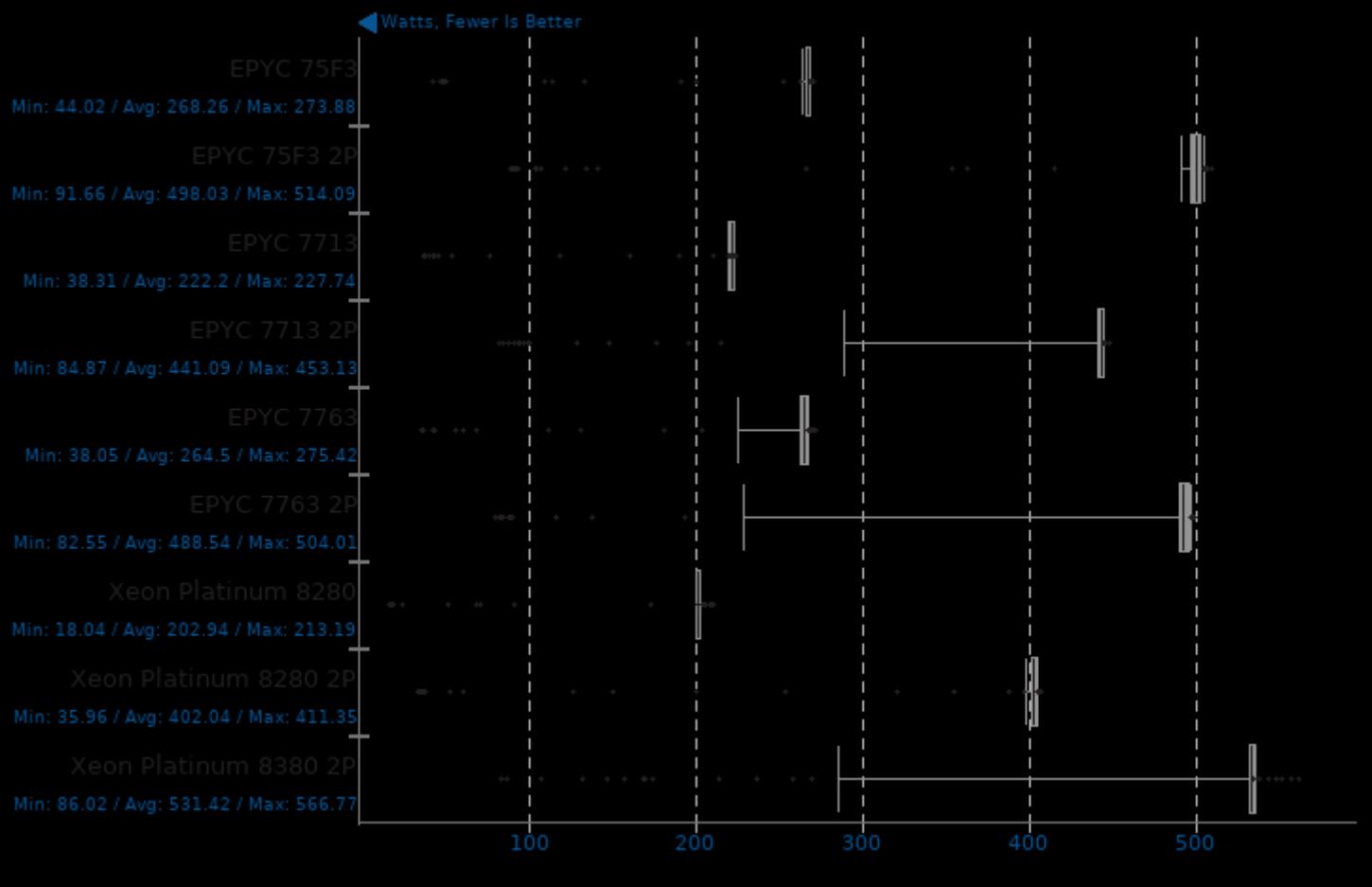
LAMMPS Molecular Dynamics Simulator 29Oct2020

Model: 20k Atoms

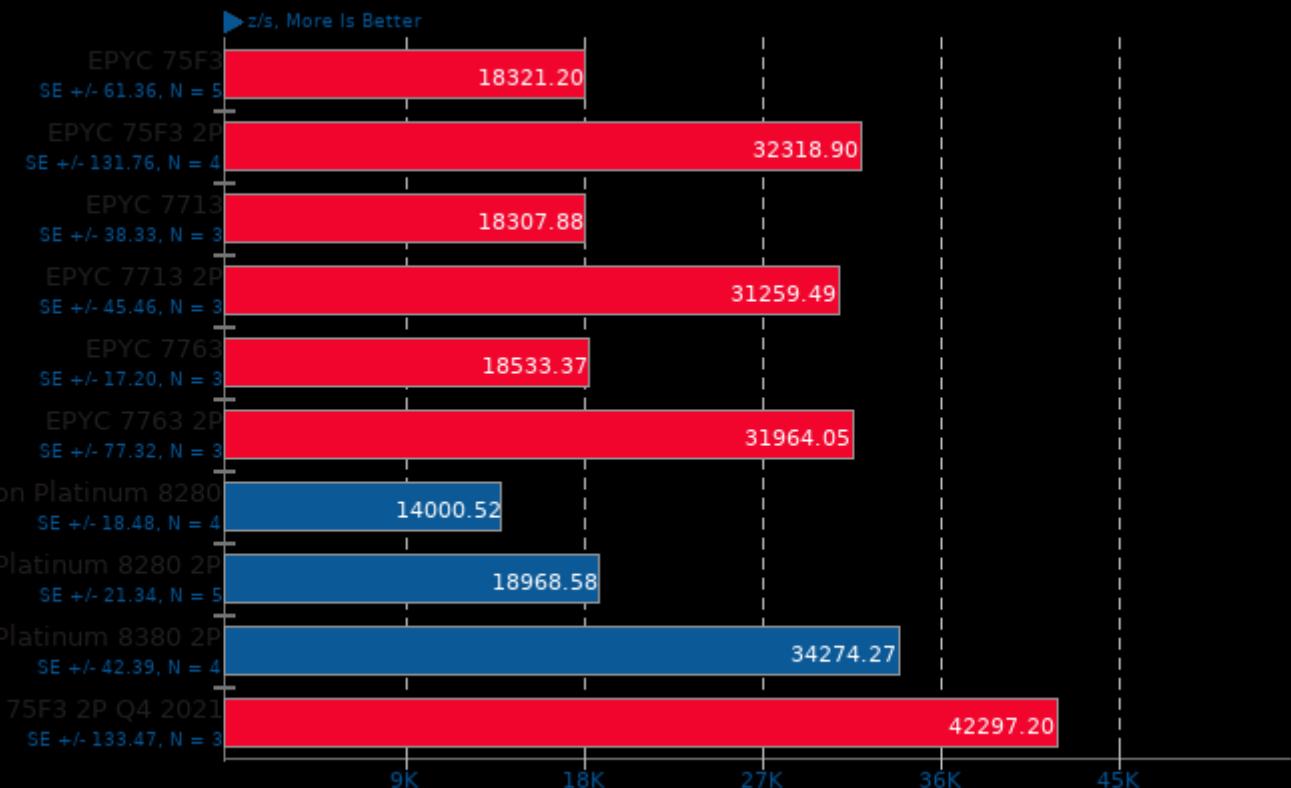


LAMMPS Molecular Dynamics Simulator 29Oct2020

CPU Power Consumption Monitor

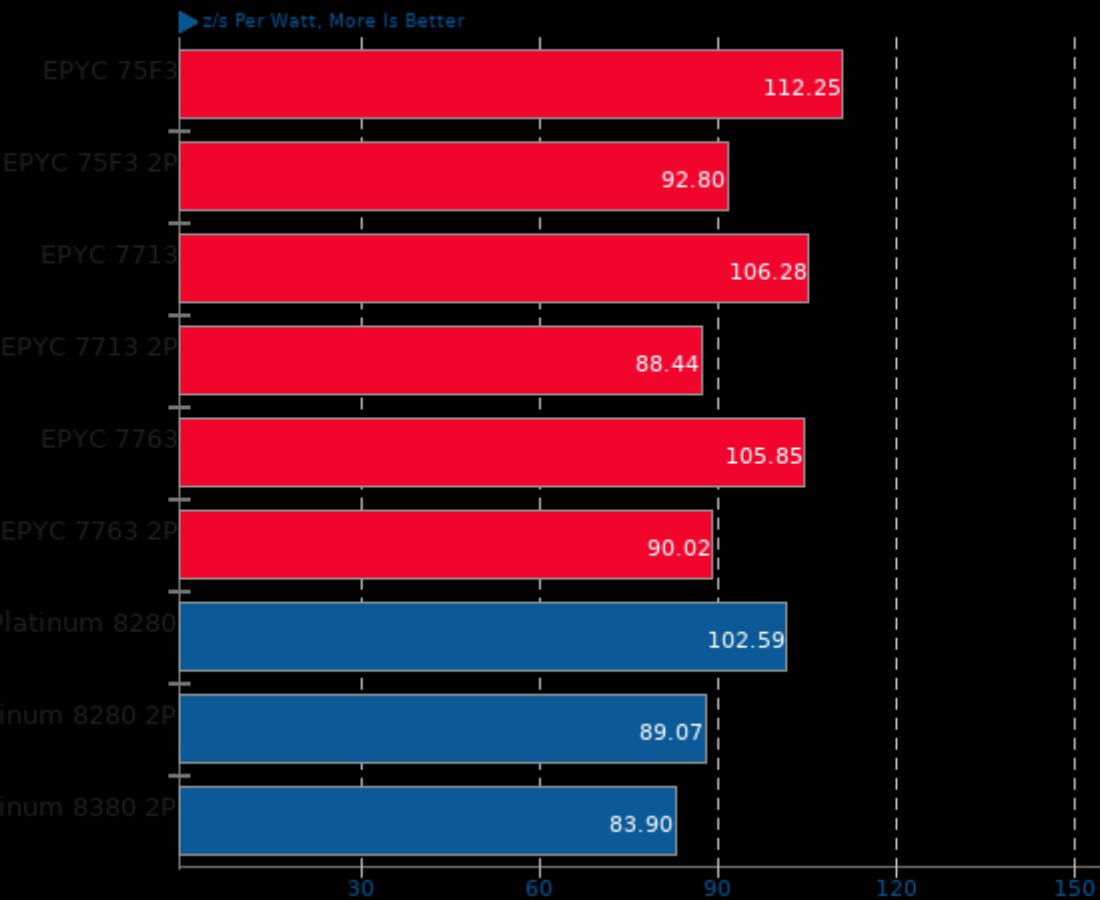


LULESH 2.0.3



1. (CXX) g++ options: -O3 -fopenmp -lpthread -lmpi_cxx -lmpi

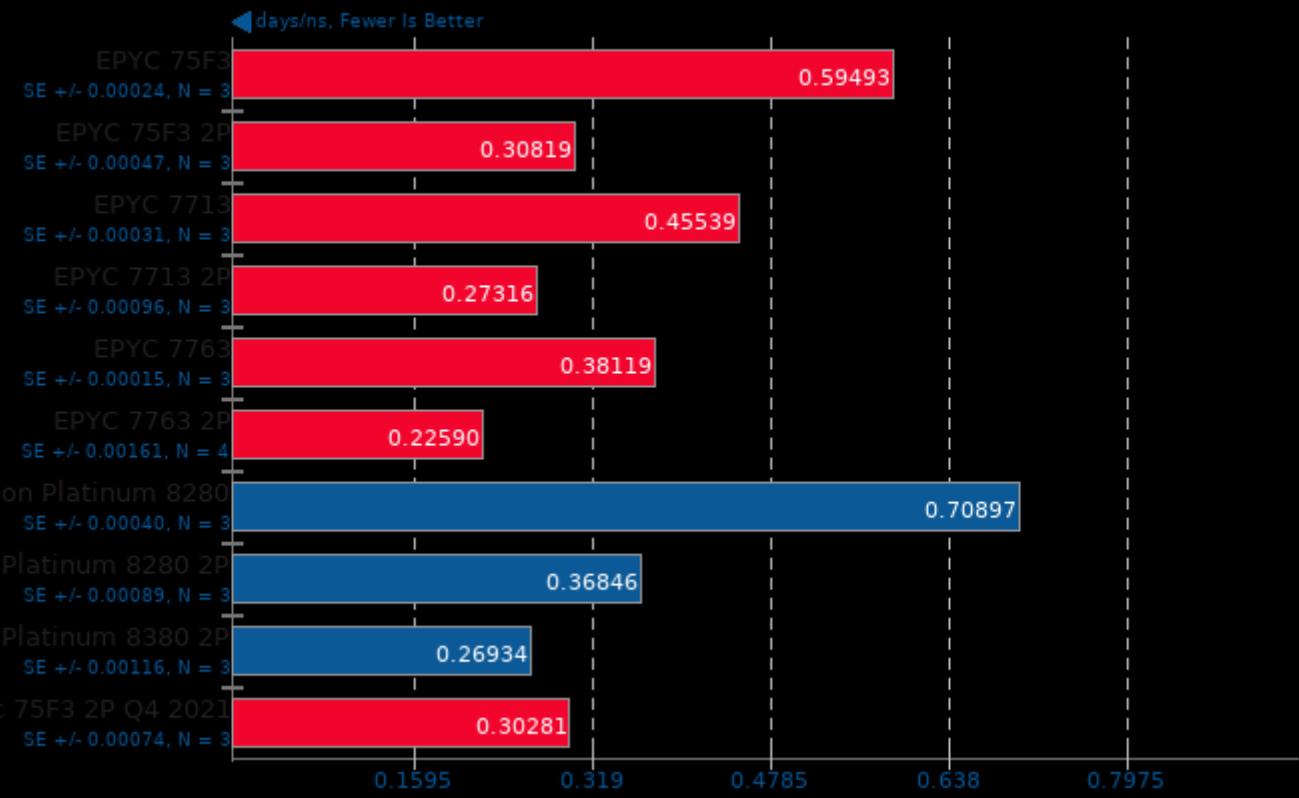
LULESH 2.0.3



Initial Intel Xeon Platinum 8380 2P Benchmarks

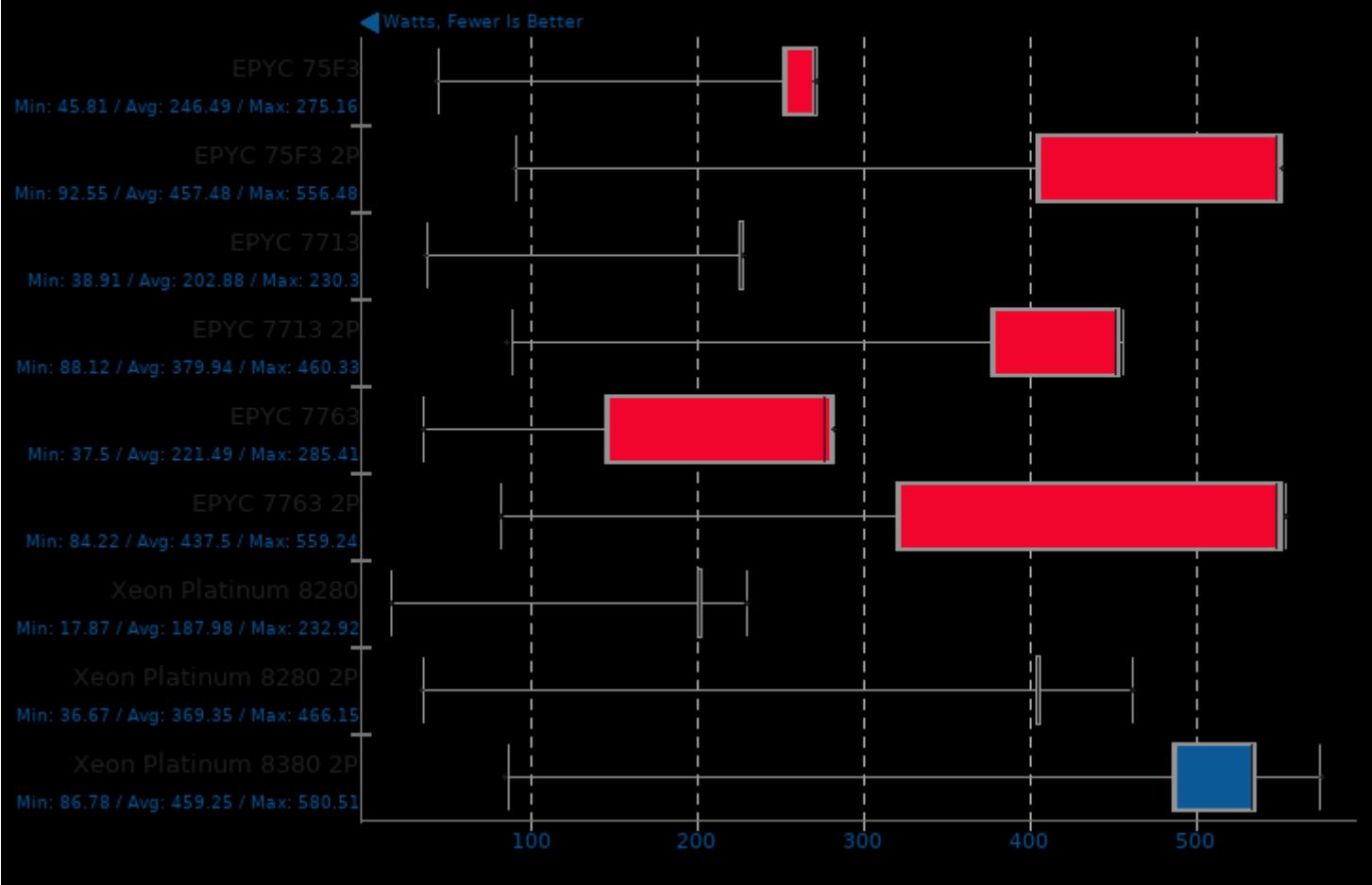
NAMD 2.14

ATPase Simulation - 327,506 Atoms



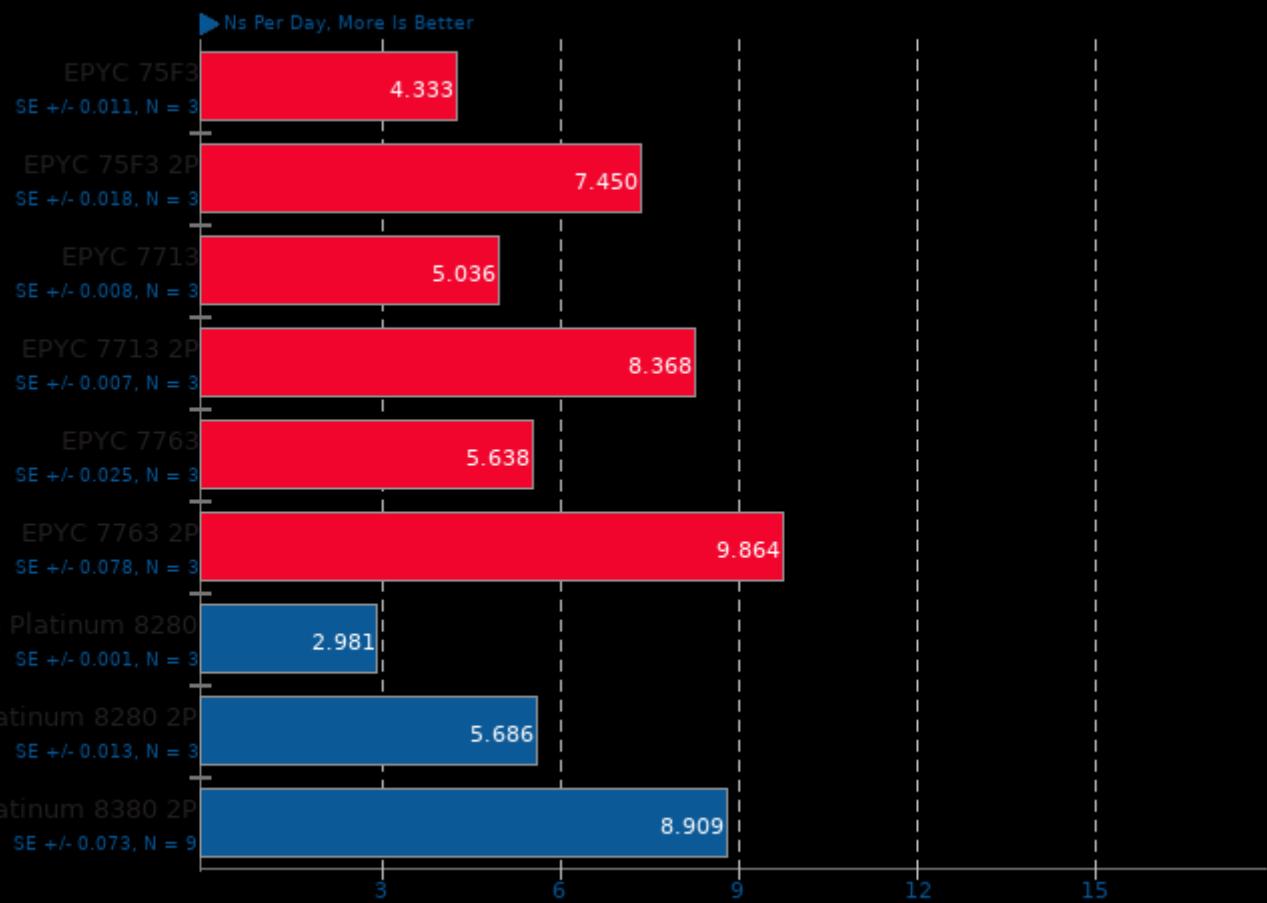
NAMD 2.14

CPU Power Consumption Monitor



GROMACS 2020.3

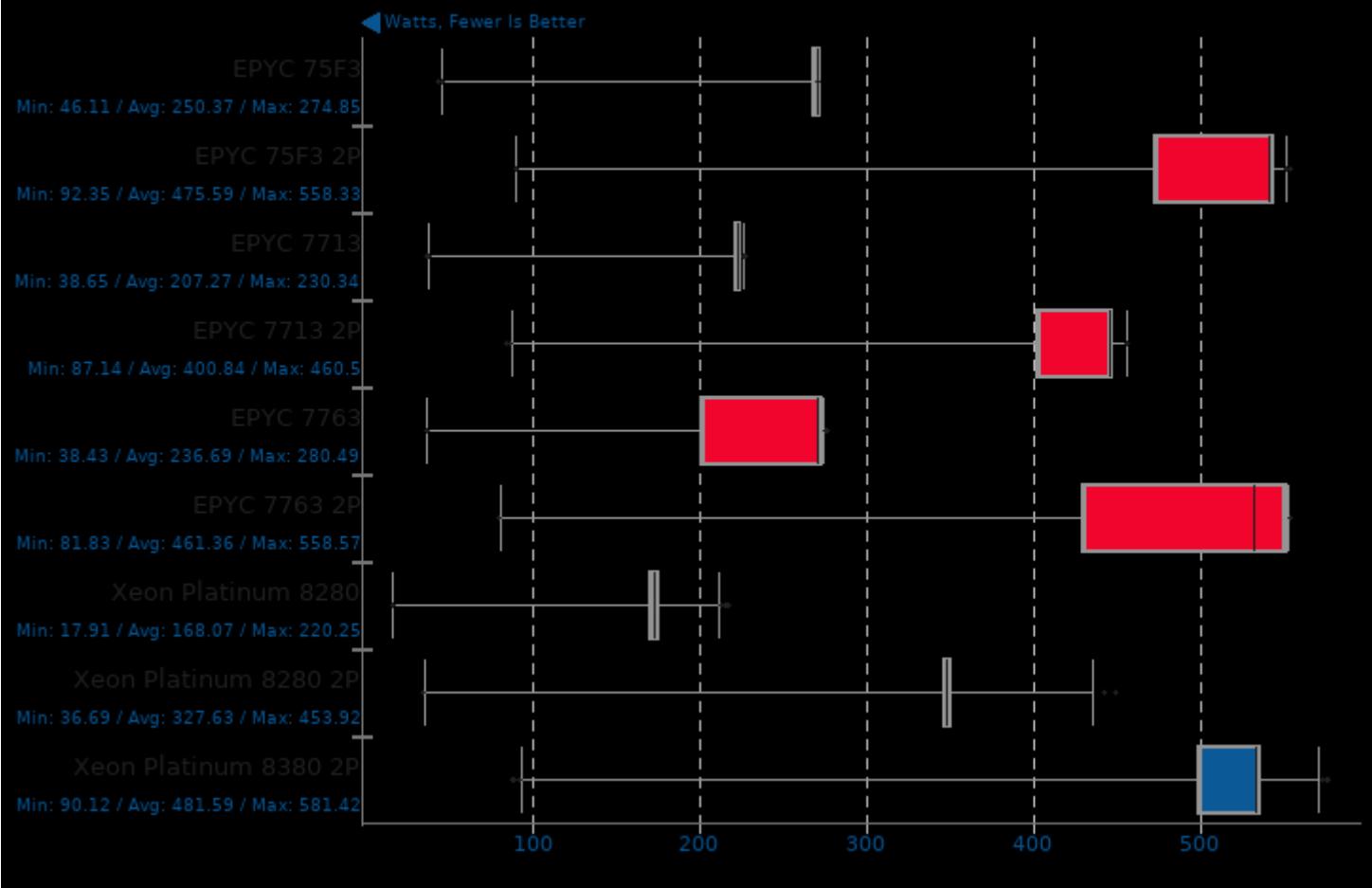
Water Benchmark



1. (CXX) g++ options: -O3 -pthread -Irt -lpthread -lm

GROMACS 2020.3

CPU Power Consumption Monitor



Initial Intel Xeon Platinum 8380 2P Benchmarks

NAS Parallel Benchmarks 3.4

Test / Class: EP.D



1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi

2. EPYC 75F3: Open MPI 4.0.3

3. EPYC 75F3 2P: Open MPI 4.0.3

4. EPYC 7713: Open MPI 4.0.3

5. EPYC 7713 2P: Open MPI 4.0.3

6. EPYC 7763: Open MPI 4.0.3

7. EPYC 7763 2P: Open MPI 4.0.3

8. Xeon Platinum 8280: Open MPI 4.0.3

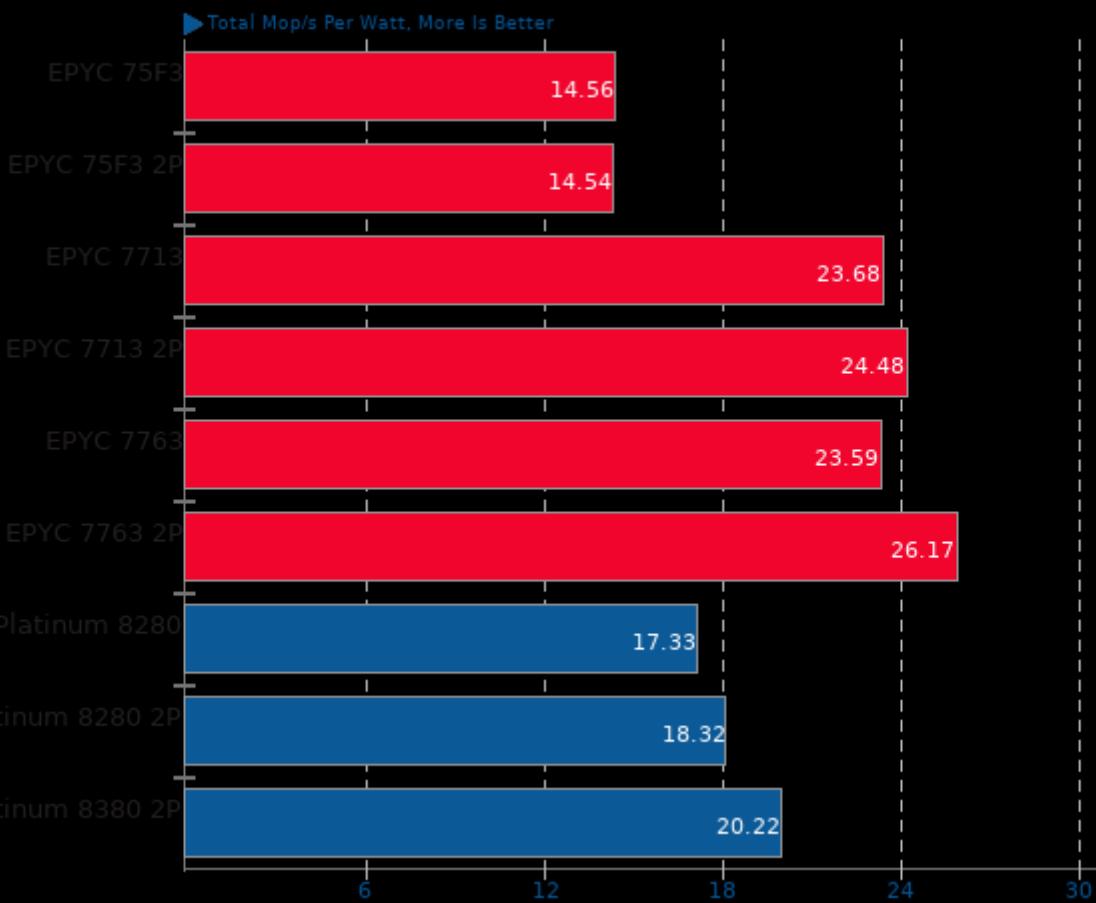
9. Xeon Platinum 8280 2P: Open MPI 4.0.3

10. Xeon Platinum 8380 2P: Open MPI 4.0.3

11. Epyc 75F3 2P Q4 2021: Open MPI 4.1.0

NAS Parallel Benchmarks 3.4

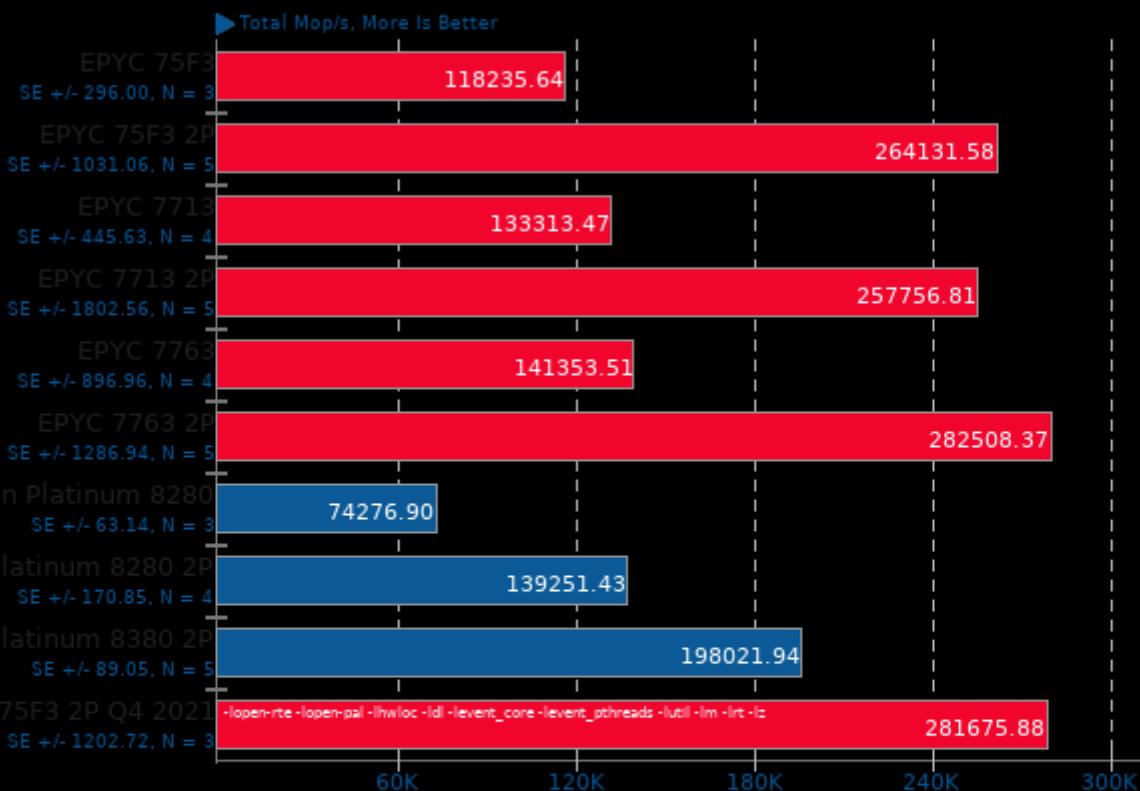
Test / Class: EP.D



Initial Intel Xeon Platinum 8380 2P Benchmarks

NAS Parallel Benchmarks 3.4

Test / Class: LU.C



1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi

2. EPYC 75F3: Open MPI 4.0.3

3. EPYC 75F3 2P: Open MPI 4.0.3

4. EPYC 7713: Open MPI 4.0.3

5. EPYC 7713 2P: Open MPI 4.0.3

6. EPYC 7763: Open MPI 4.0.3

7. EPYC 7763 2P: Open MPI 4.0.3

8. Xeon Platinum 8280: Open MPI 4.0.3

9. Xeon Platinum 8280 2P: Open MPI 4.0.3

10. Xeon Platinum 8380 2P: Open MPI 4.0.3

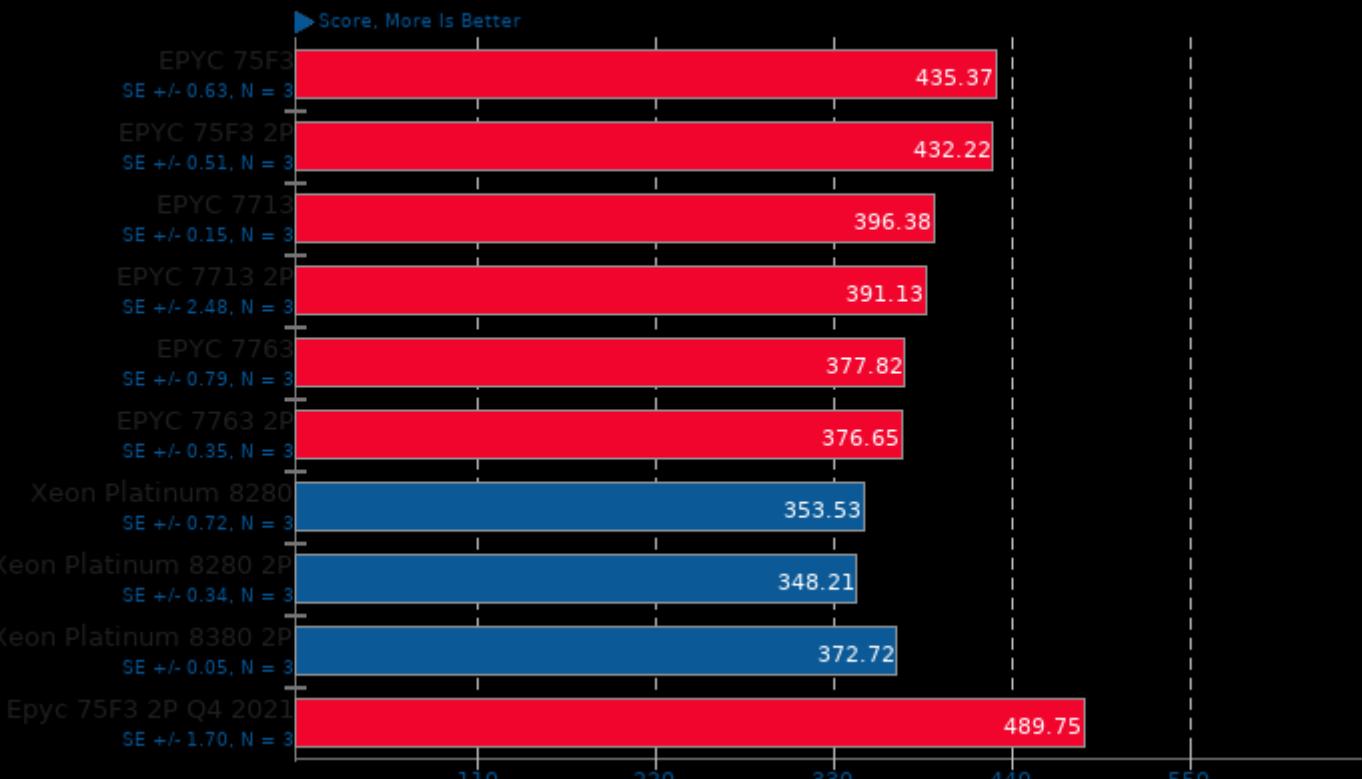
11. Epyc 75F3 2P Q4 2021: Open MPI 4.1.0

NAS Parallel Benchmarks 3.4

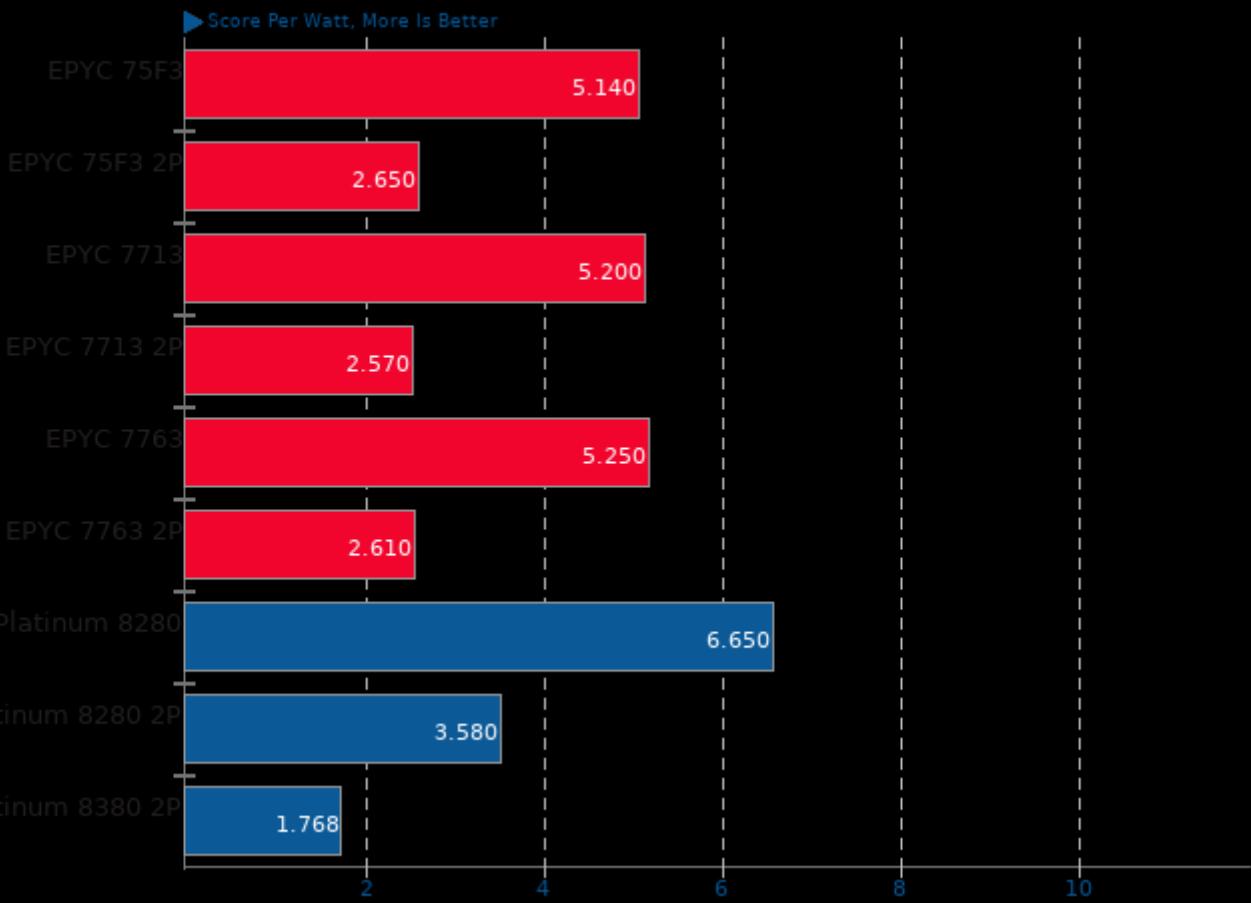
Test / Class: LU.C



Numpy Benchmark



Numpy Benchmark



Initial Intel Xeon Platinum 8380 2P Benchmarks

OpenFOAM 8

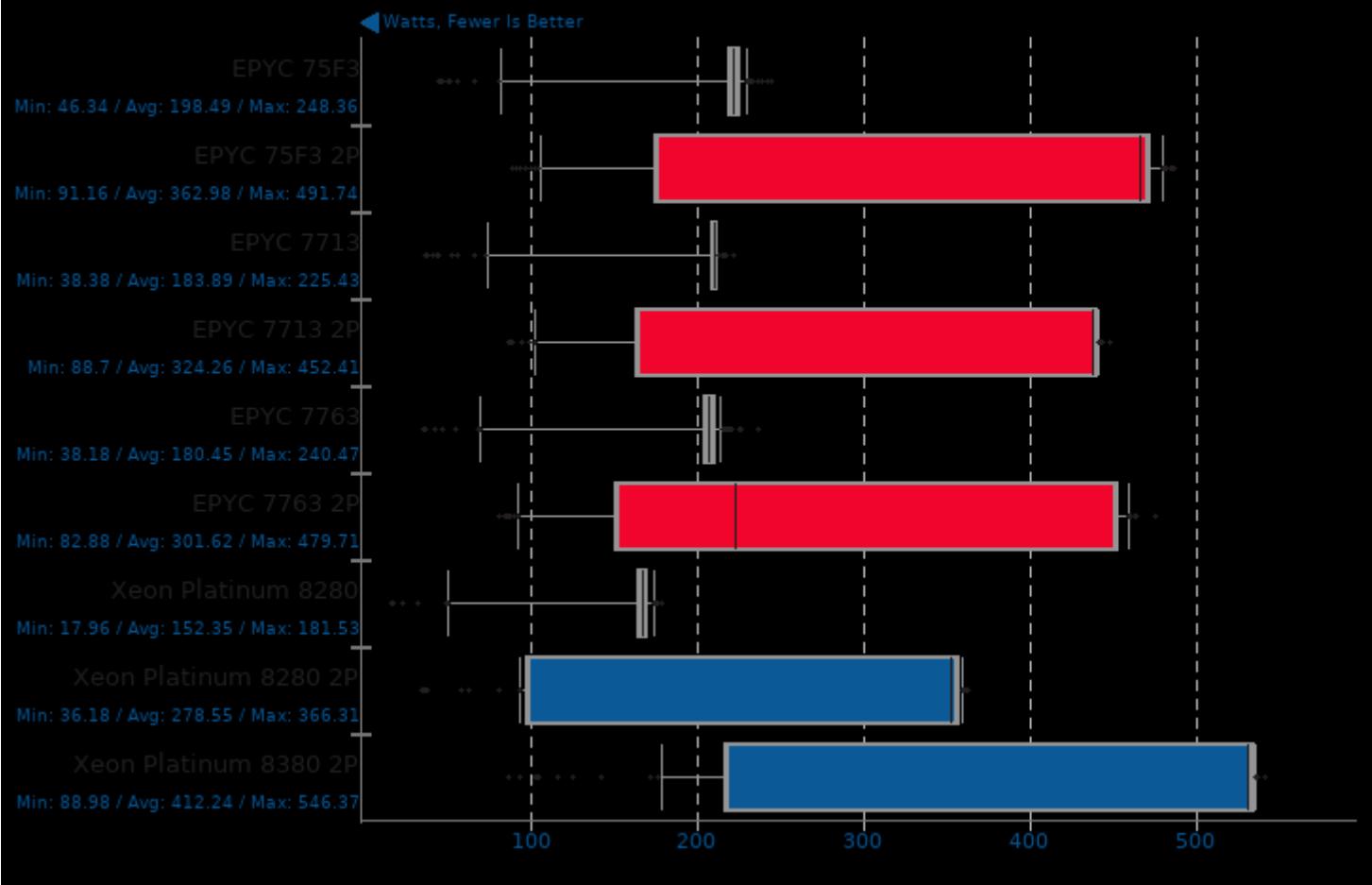
Input: Motorbike 60M



l. (CXX) g++ options: -std=c++11 -m64 -O3 -ftemplate-depth=100 -fPIC -fuse-lld=bfd -Xlinker --add-needed --no-as-needed -ldynamicMesh -ldecompose

OpenFOAM 8

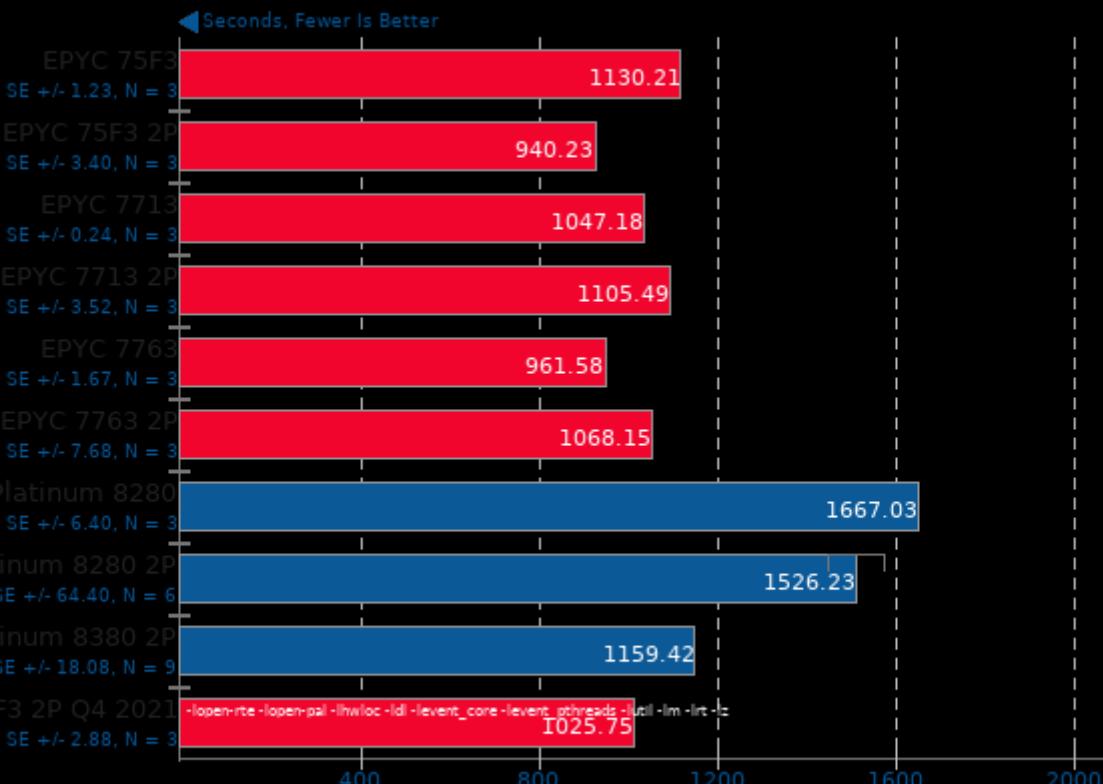
CPU Power Consumption Monitor



Initial Intel Xeon Platinum 8380 2P Benchmarks

Quantum ESPRESSO 6.7

Input: AUSURF112

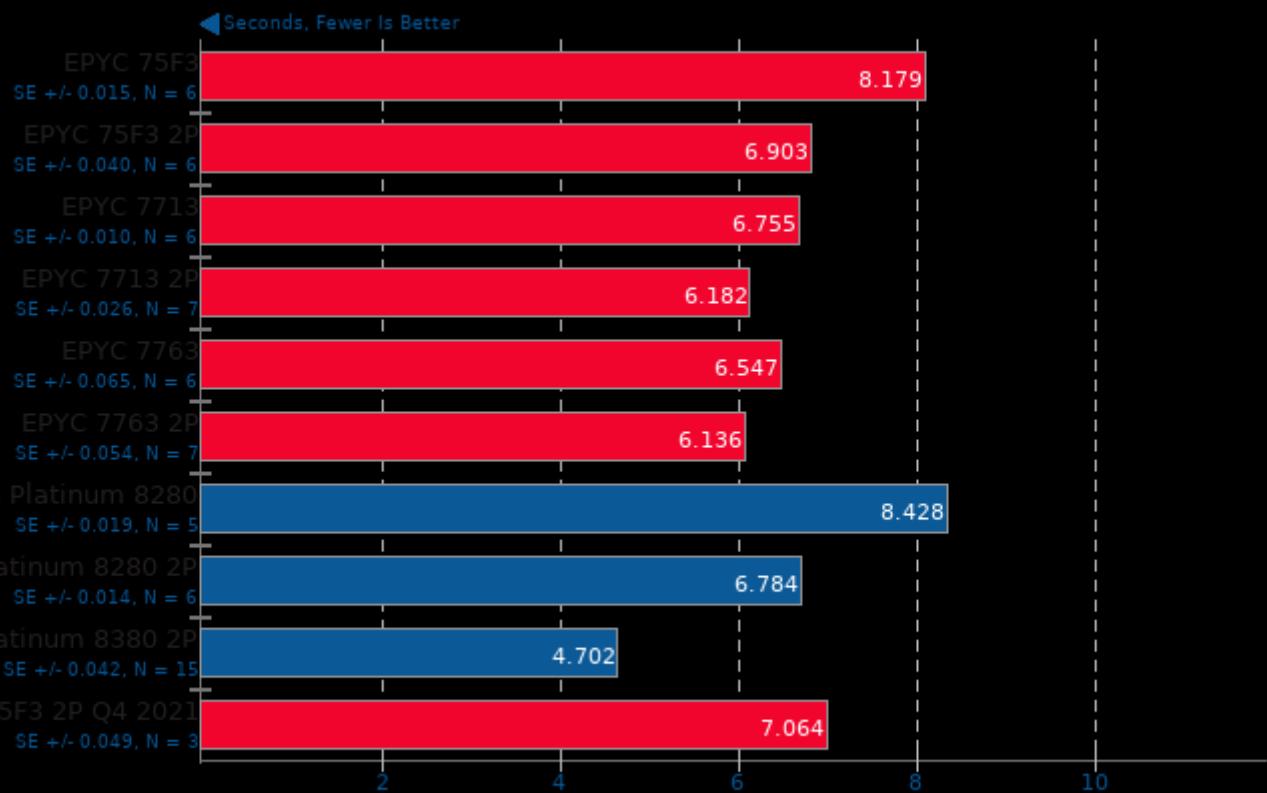


1. (F9X) gfortran options: -lopenblas -lFoX_dom -lFoX_sax -lFoX_wxml -lFoX_common -lFoX_utils -lFoX_fsys -fftw3 -pthread -lmpi_usempif08 -lmpi_mpifh -

Initial Intel Xeon Platinum 8380 2P Benchmarks

Rodinia 3.1

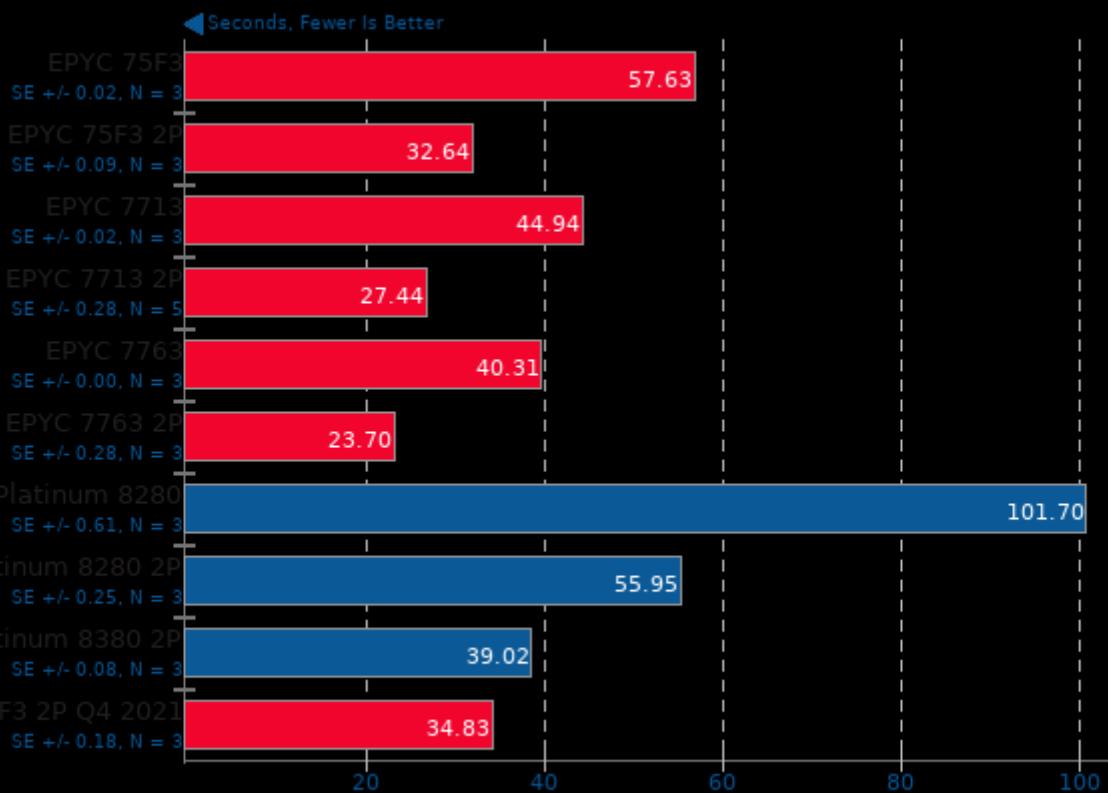
Test: OpenMP CFD Solver



1. (CXX) g++ options: -O2 -fOpenCL

Rodinia 3.1

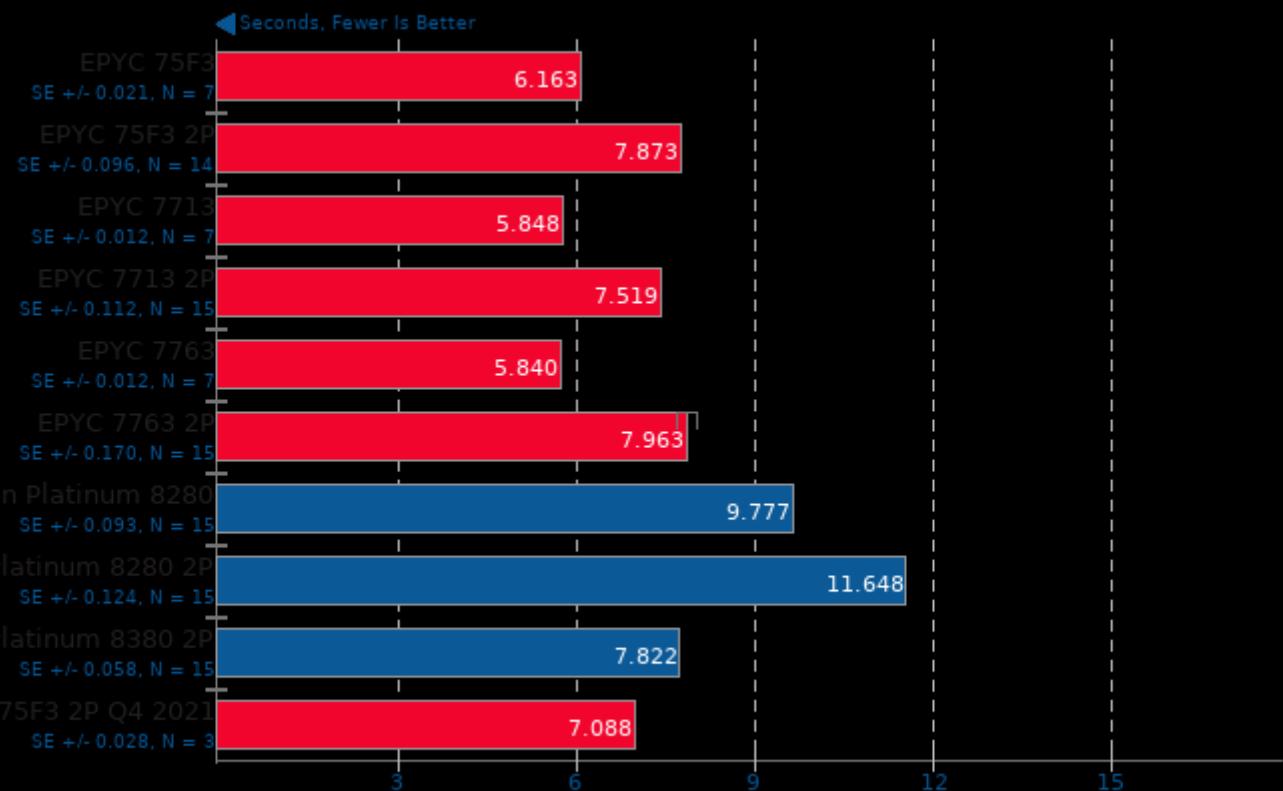
Test: OpenMP LavaMD



1. (CXX) g++ options: -O2 -fOpenCL

Rodinia 3.1

Test: OpenMP Streamcluster

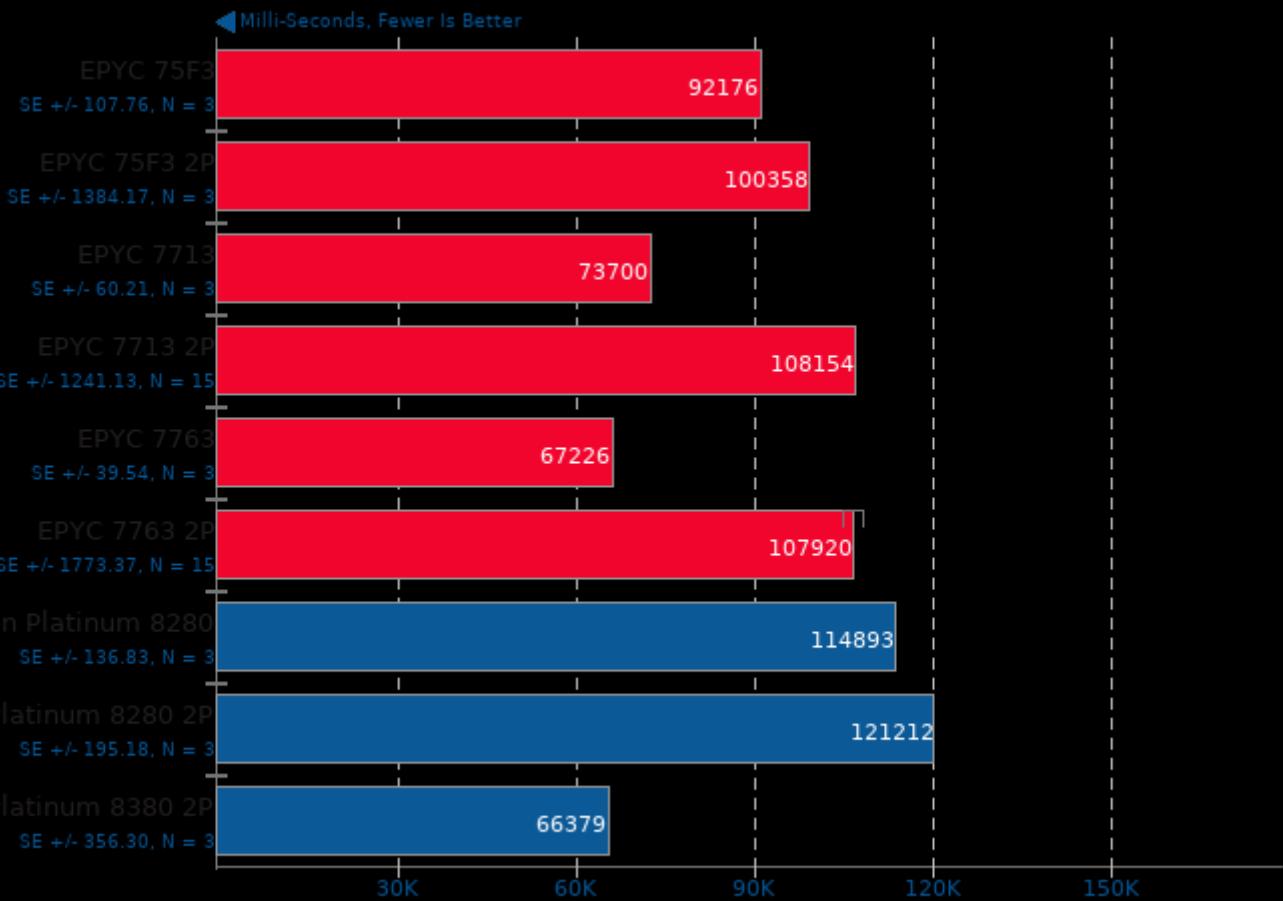


1. (CXX) g++ options: -O2 -fOpenCL

Initial Intel Xeon Platinum 8380 2P Benchmarks

Caffe 2020-02-13

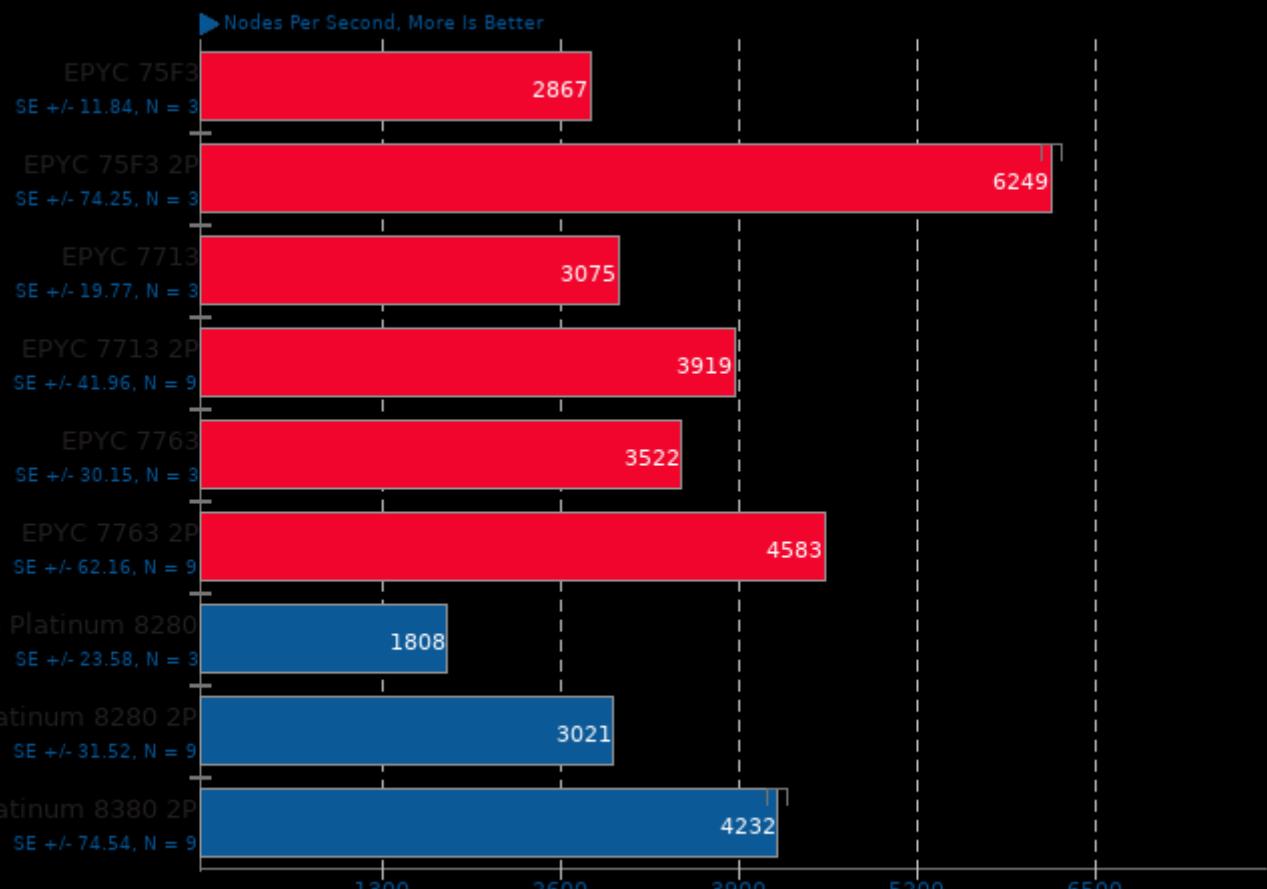
Model: AlexNet - Acceleration: CPU - Iterations: 200



1. (CXX) g++ options: -fPIC -O3 -rdynamic -lglog -lprotobuf -lpthread -lsz -lz -ldl -lm -lmlm -lopenblas

LeelaChessZero 0.26

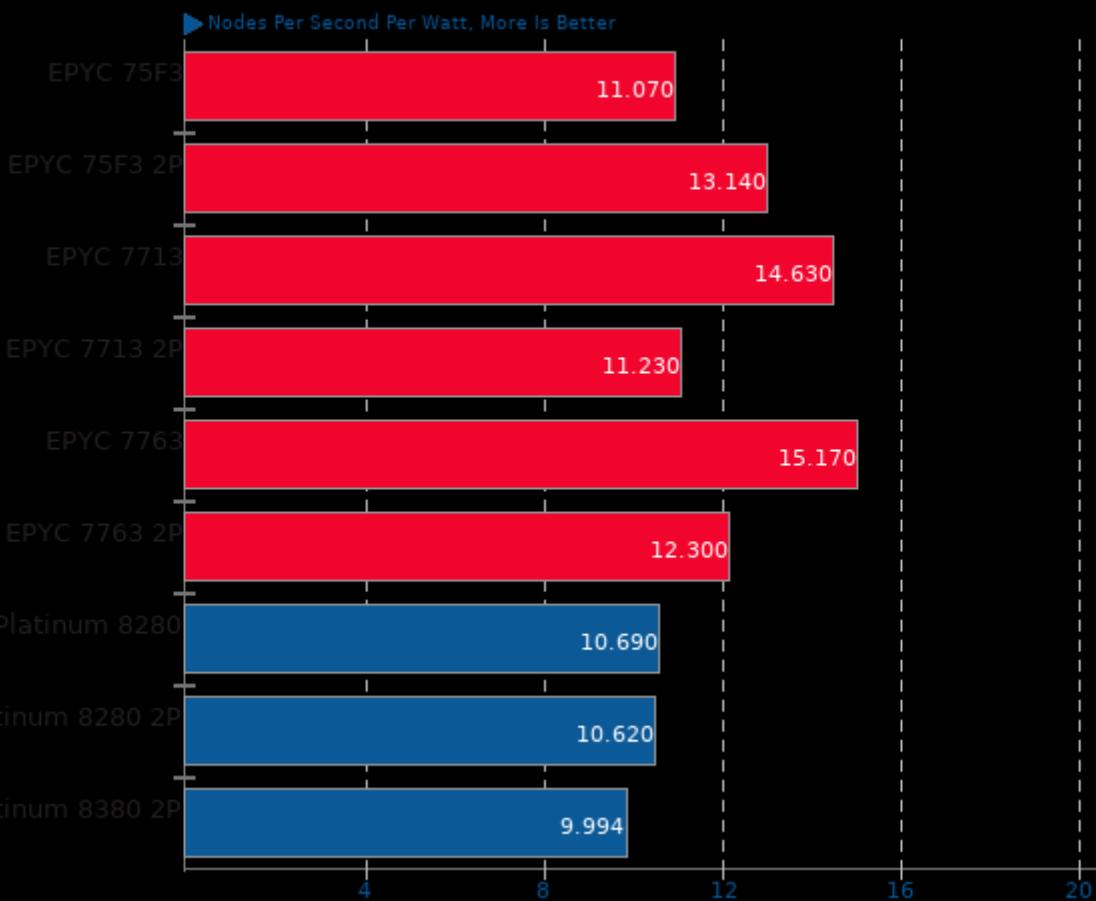
Backend: Eigen



1. (CXX) g++ options: -fno -pthread

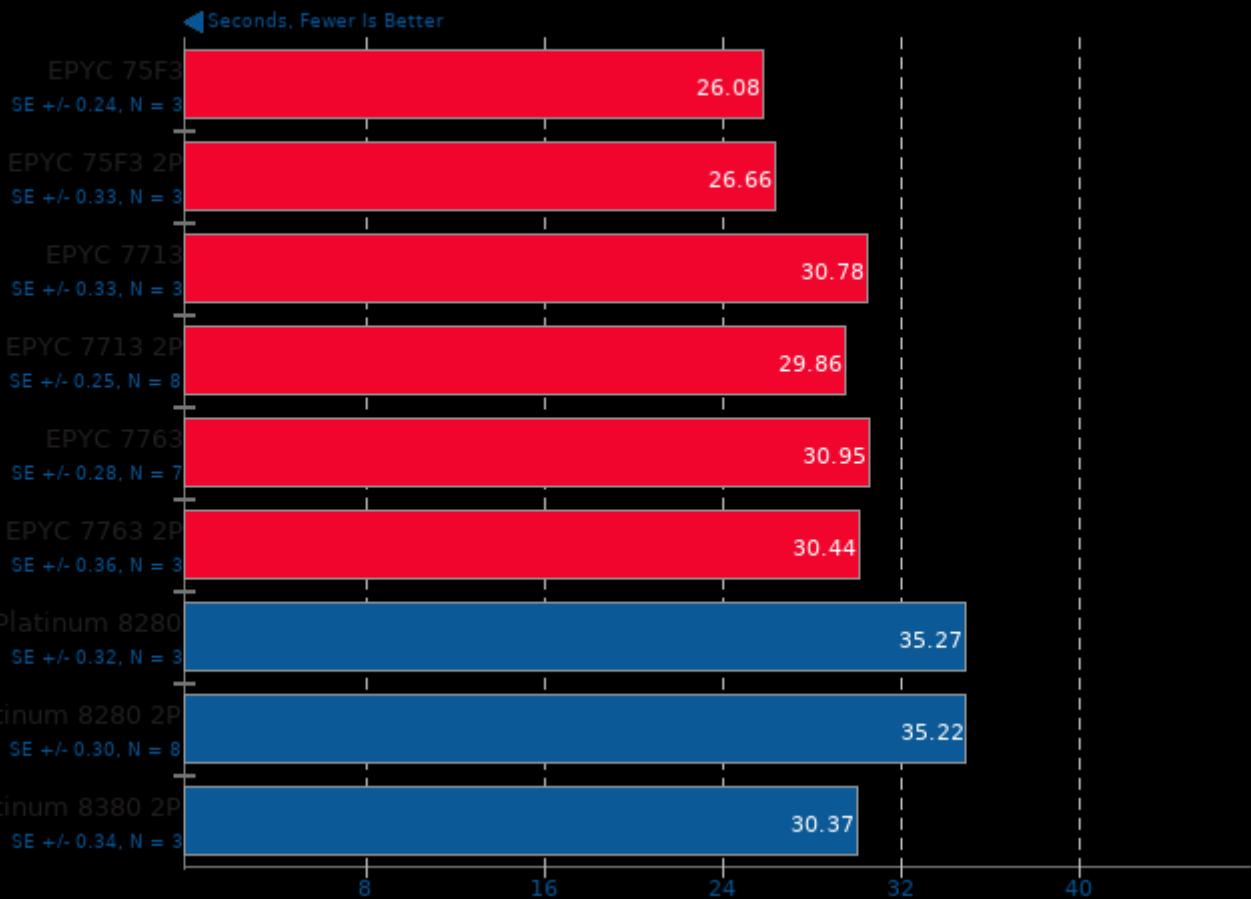
LeelaChessZero 0.26

Backend: Eigen



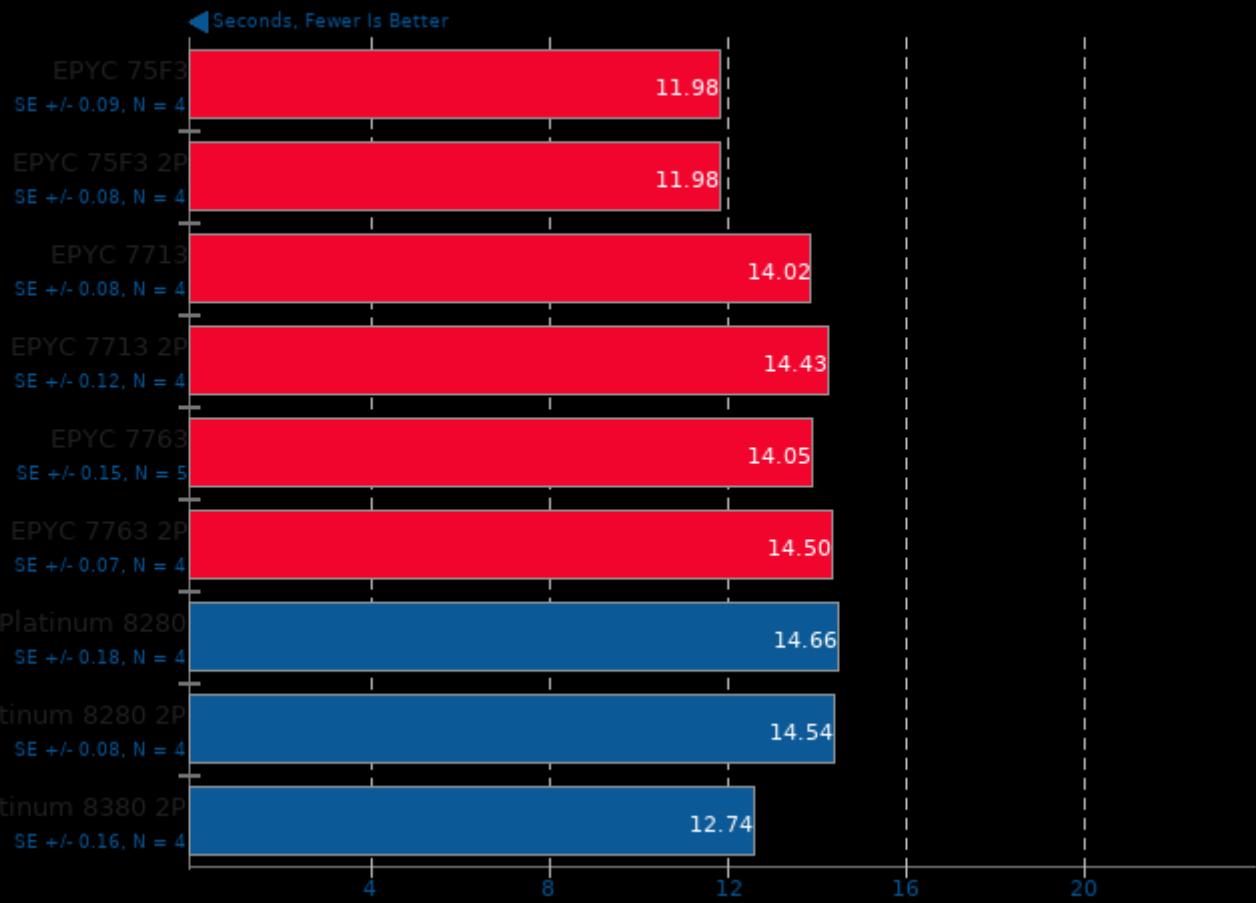
Numenta Anomaly Benchmark 1.1

Detector: Bayesian Changepoint



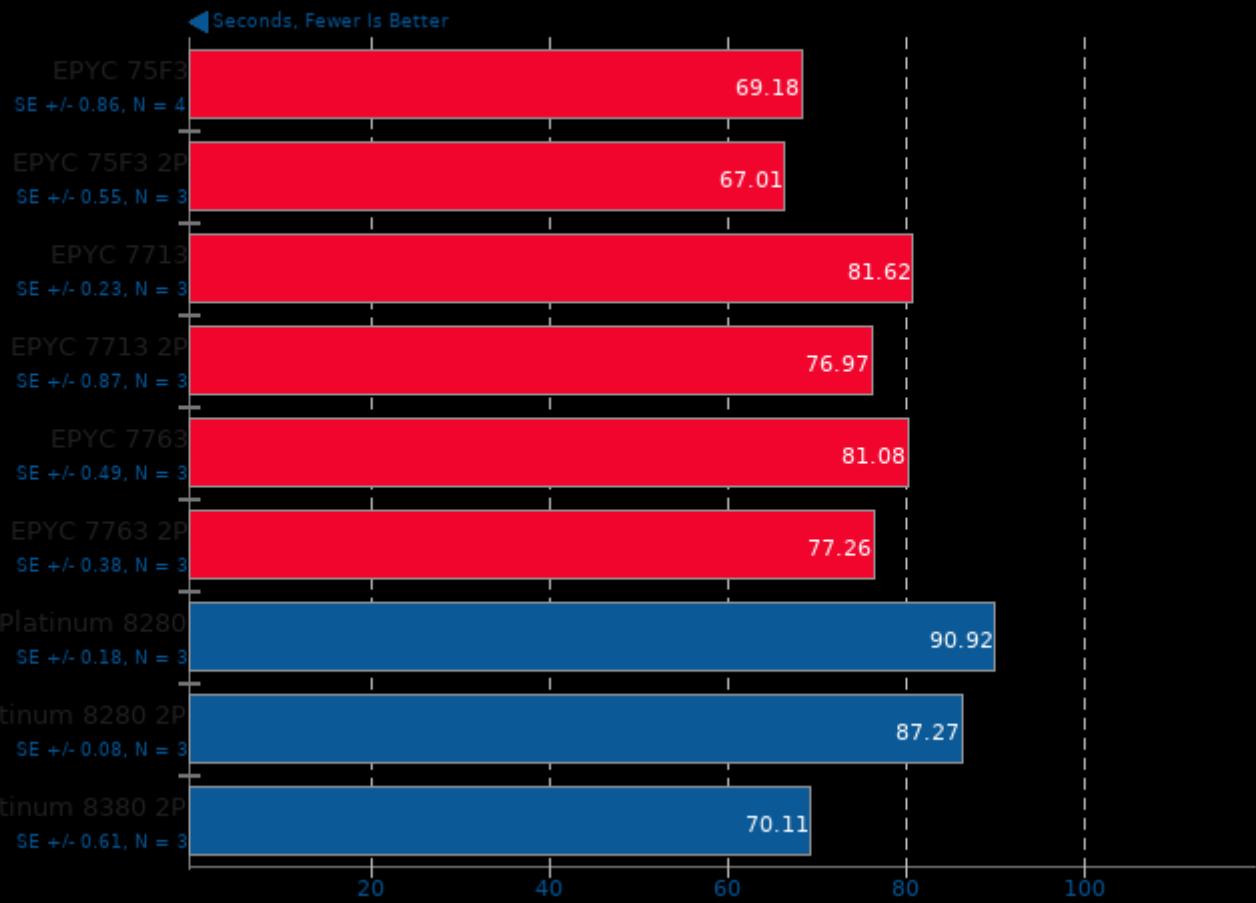
Numenta Anomaly Benchmark 1.1

Detector: Relative Entropy



Numenta Anomaly Benchmark 1.1

Detector: Earthgecko Skyline



Initial Intel Xeon Platinum 8380 2P Benchmarks

oneDNN 2.0

Harness: Convolution Batch Shapes Auto - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread

Initial Intel Xeon Platinum 8380 2P Benchmarks

oneDNN 2.0

Harness: Deconvolution Batch shapes_1d - Data Type: u8s8f32 - Engine: CPU

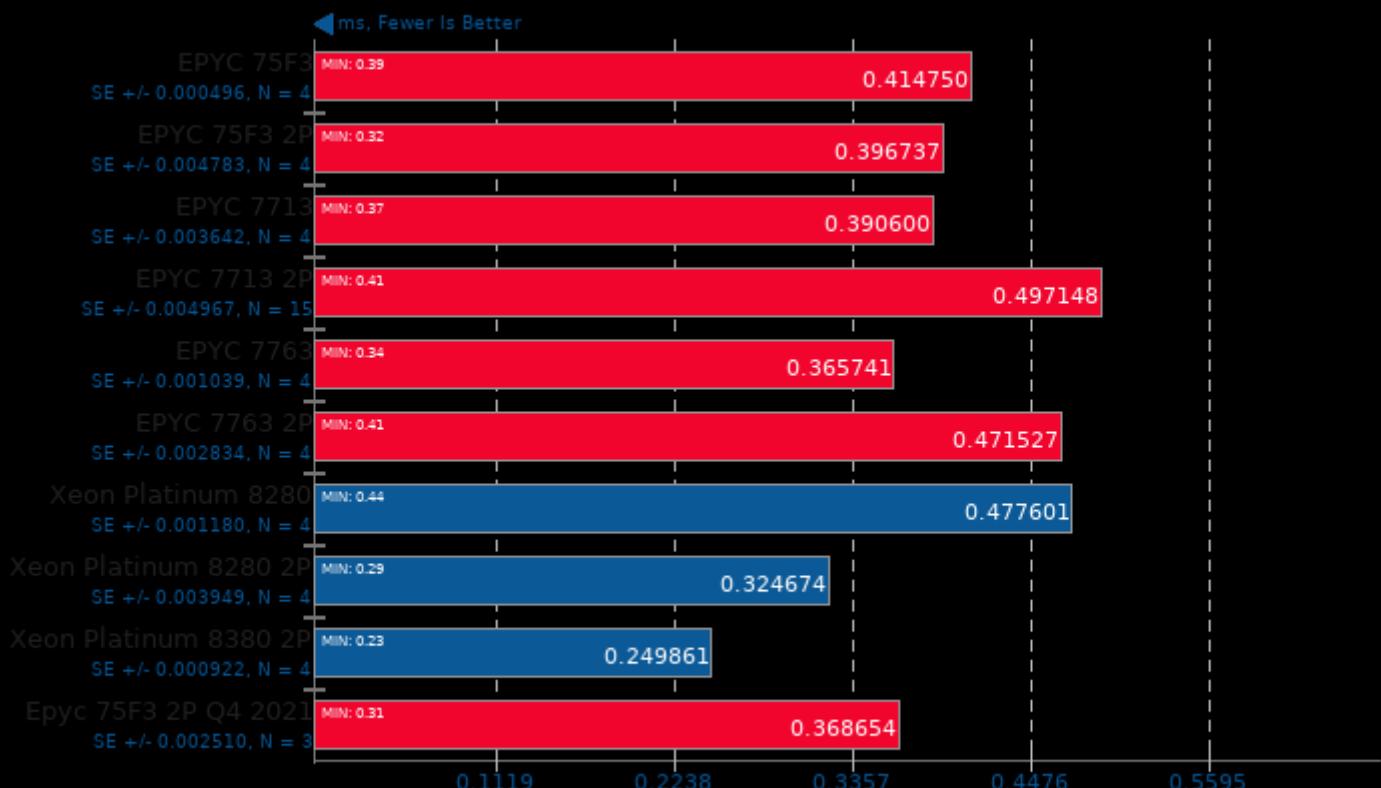


1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread

Initial Intel Xeon Platinum 8380 2P Benchmarks

oneDNN 2.0

Harness: Matrix Multiply Batch Shapes Transformer - Data Type: f32 - Engine: CPU

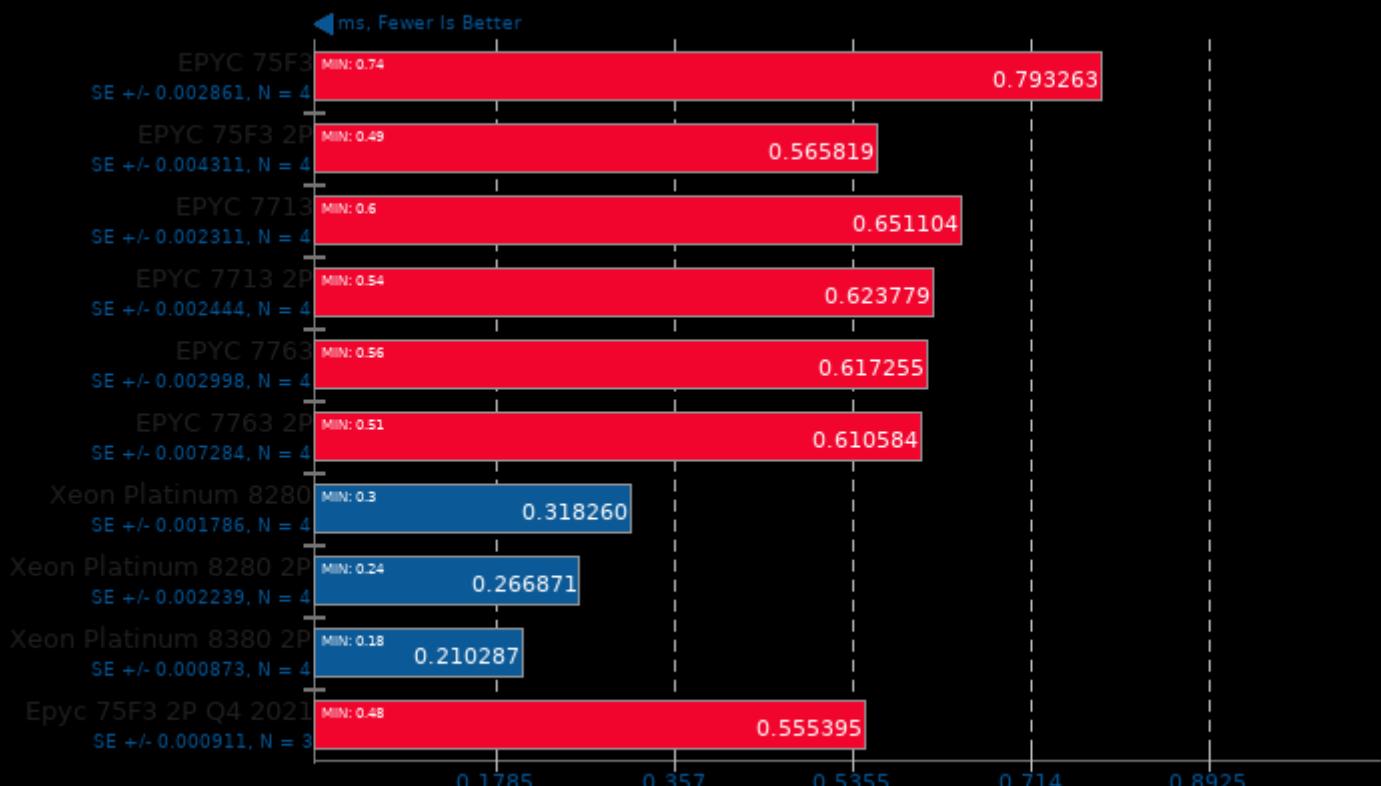


1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread

Initial Intel Xeon Platinum 8380 2P Benchmarks

oneDNN 2.0

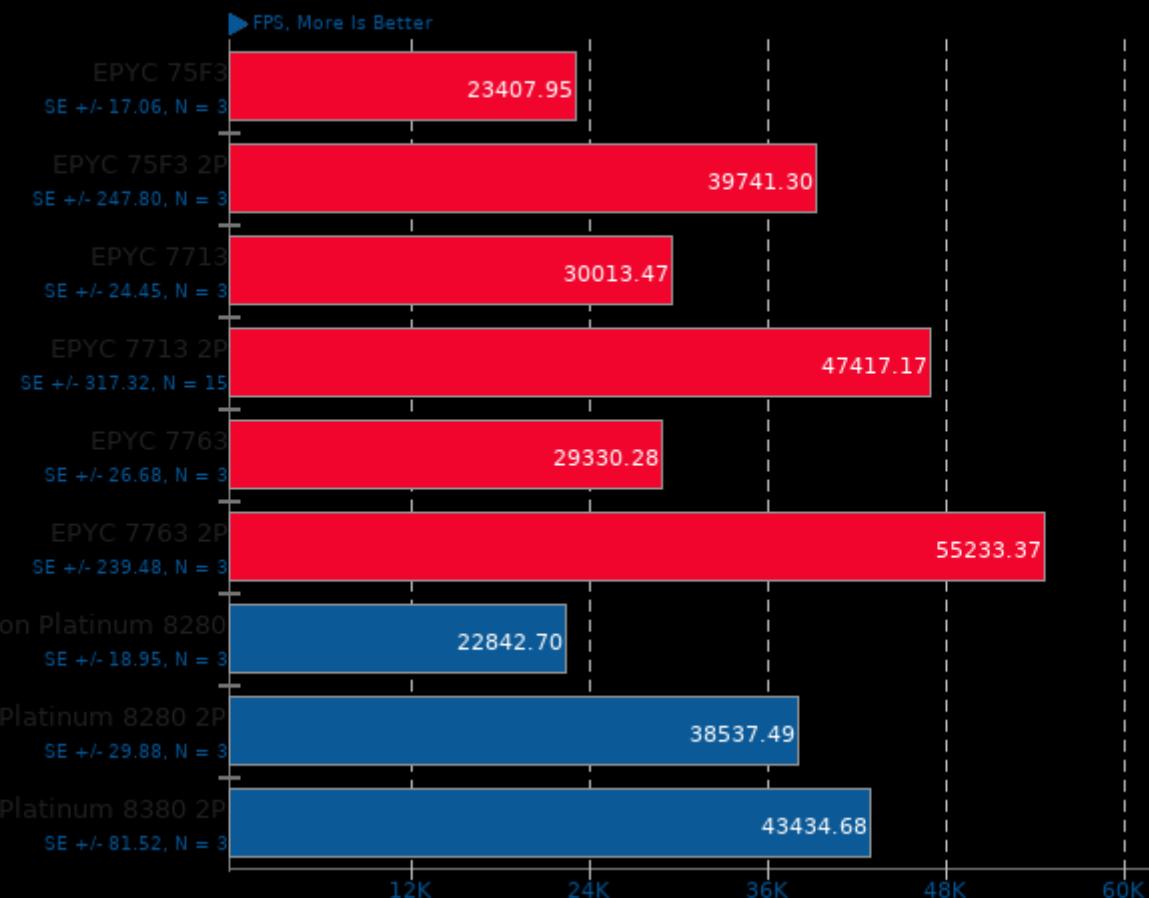
Harness: Matrix Multiply Batch Shapes Transformer - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread

OpenVINO 2021.1

Model: Age Gender Recognition Retail 0013 FP16 - Device: CPU



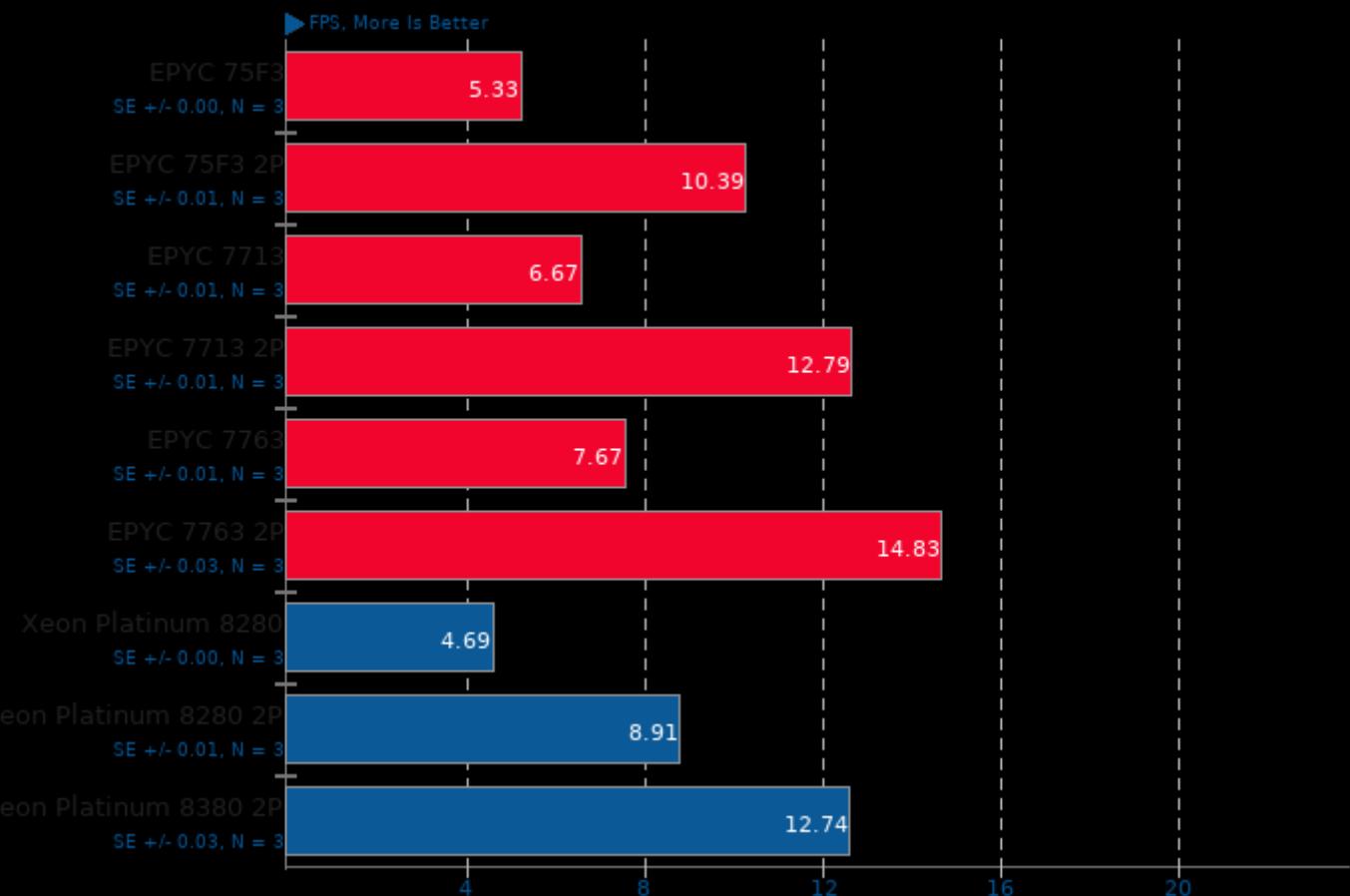
OpenVINO 2021.1

Model: Age Gender Recognition Retail 0013 FP32 - Device: CPU



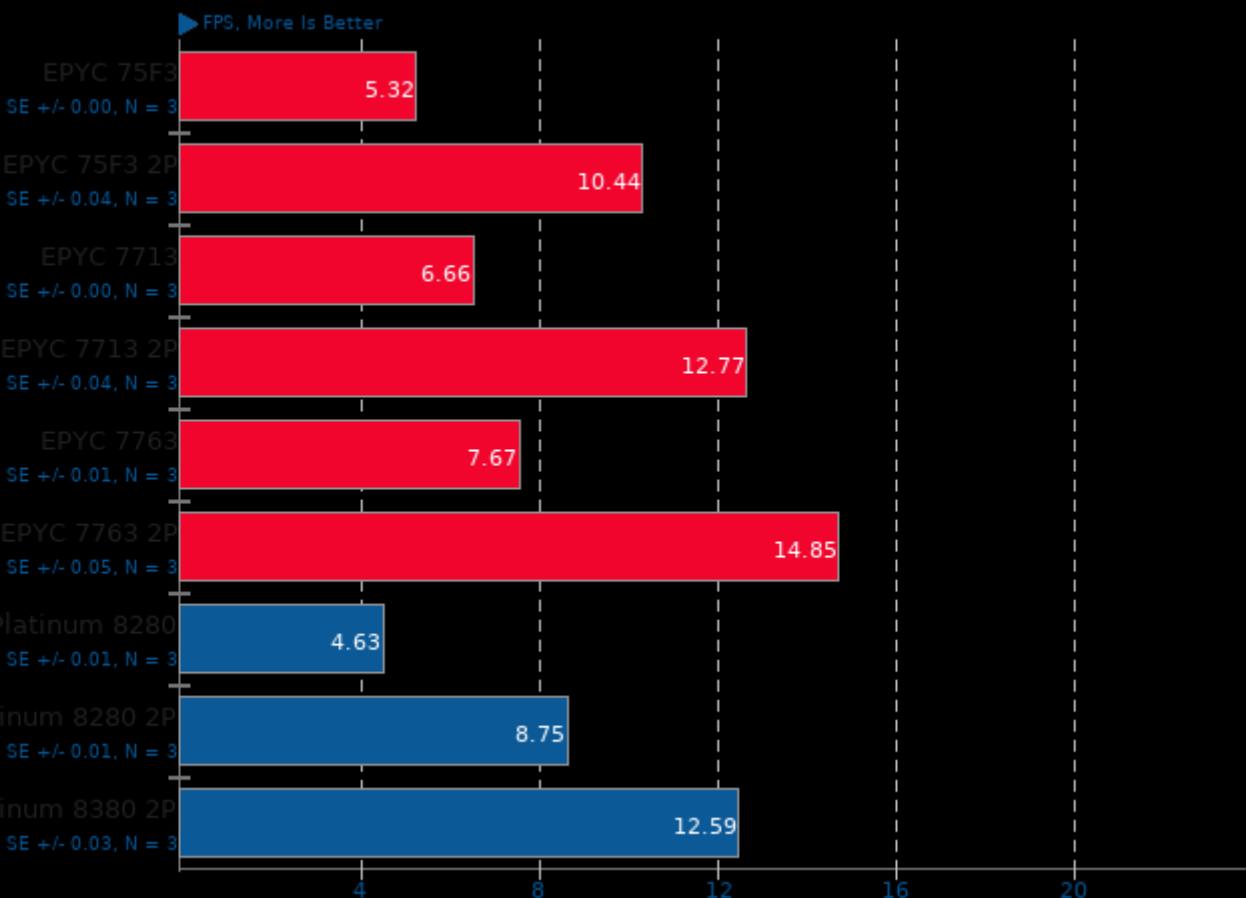
OpenVINO 2021.1

Model: Person Detection 0106 FP16 - Device: CPU



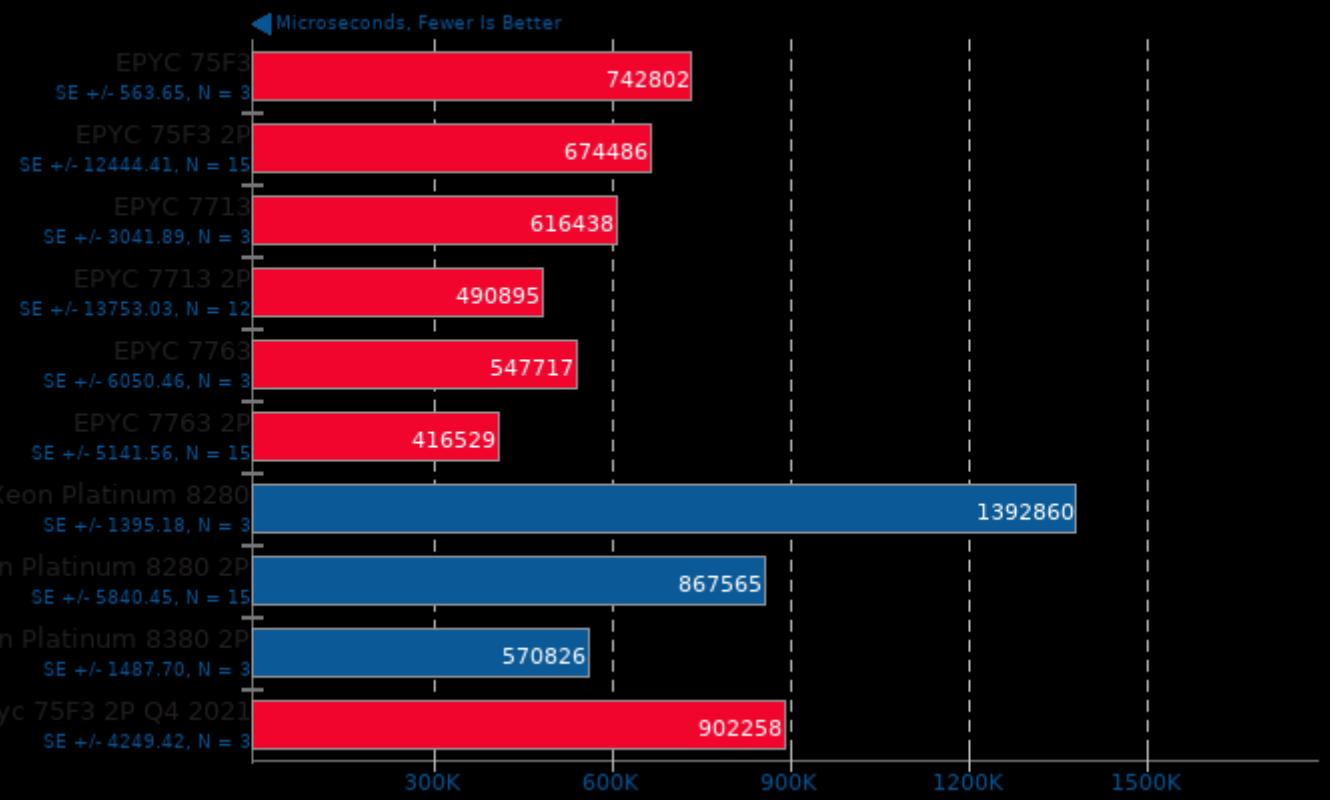
OpenVINO 2021.1

Model: Person Detection 0106 FP32 - Device: CPU



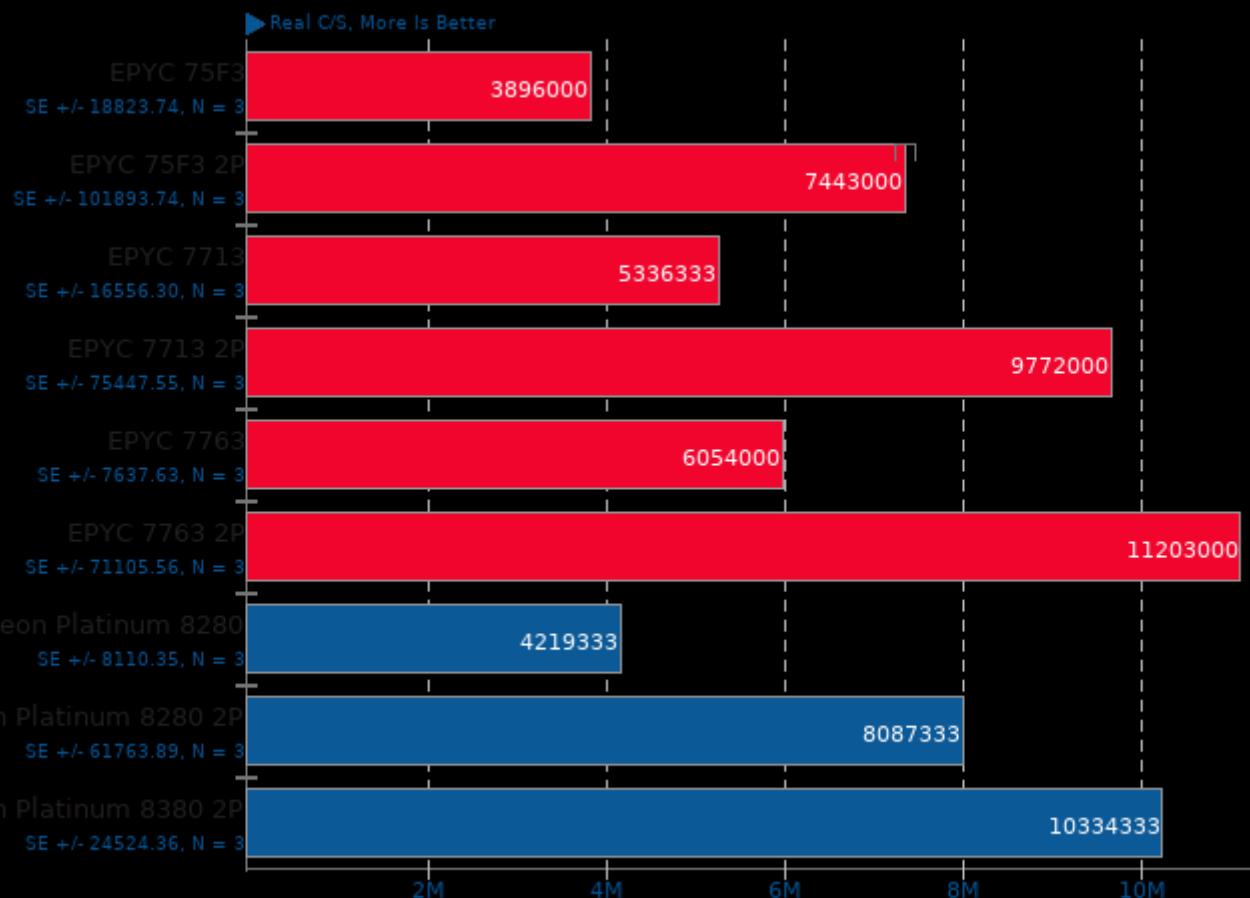
TensorFlow Lite 2020-08-23

Model: Inception ResNet V2



John The Ripper 1.9.0-jumbo-1

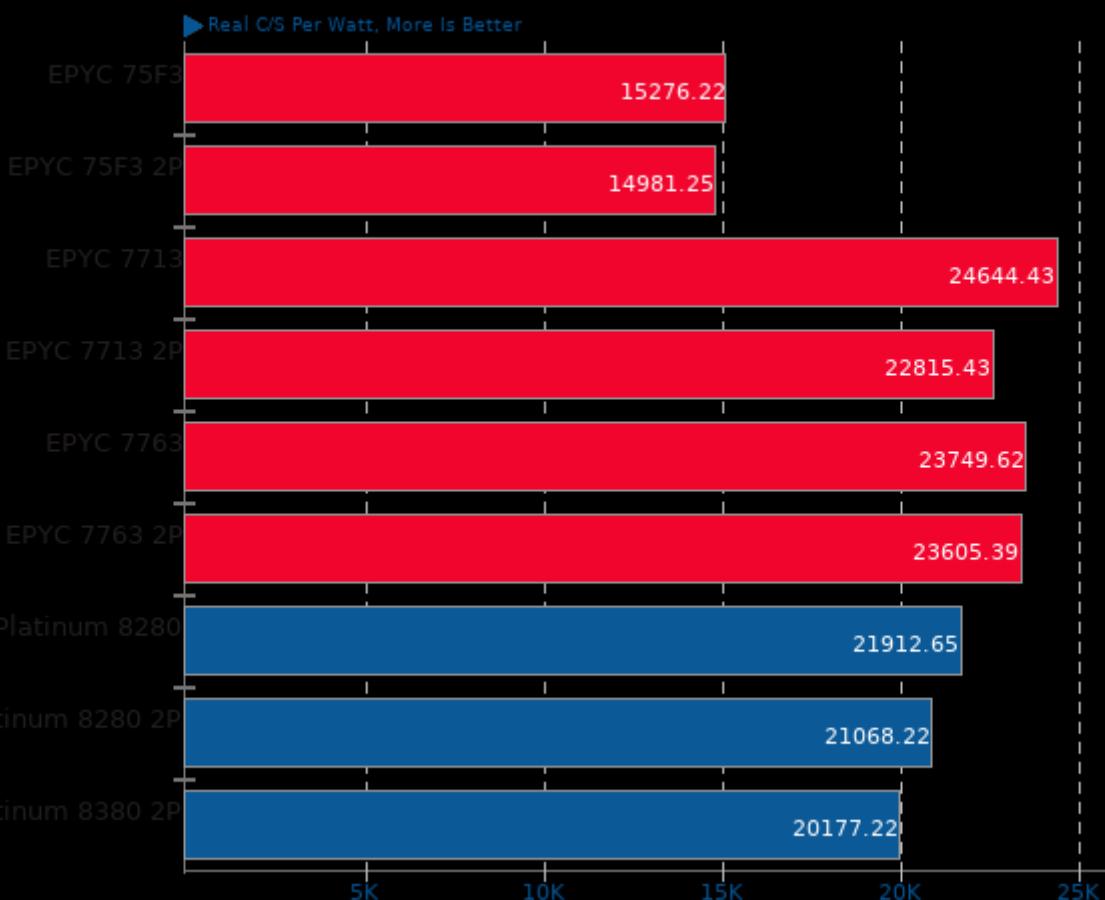
Test: MD5



1. (CC) gcc options: -m64 -lssl -lcrypto -fopenmp -lgmp -pthread -lm -lz -ldl -lcrypt -lbz2

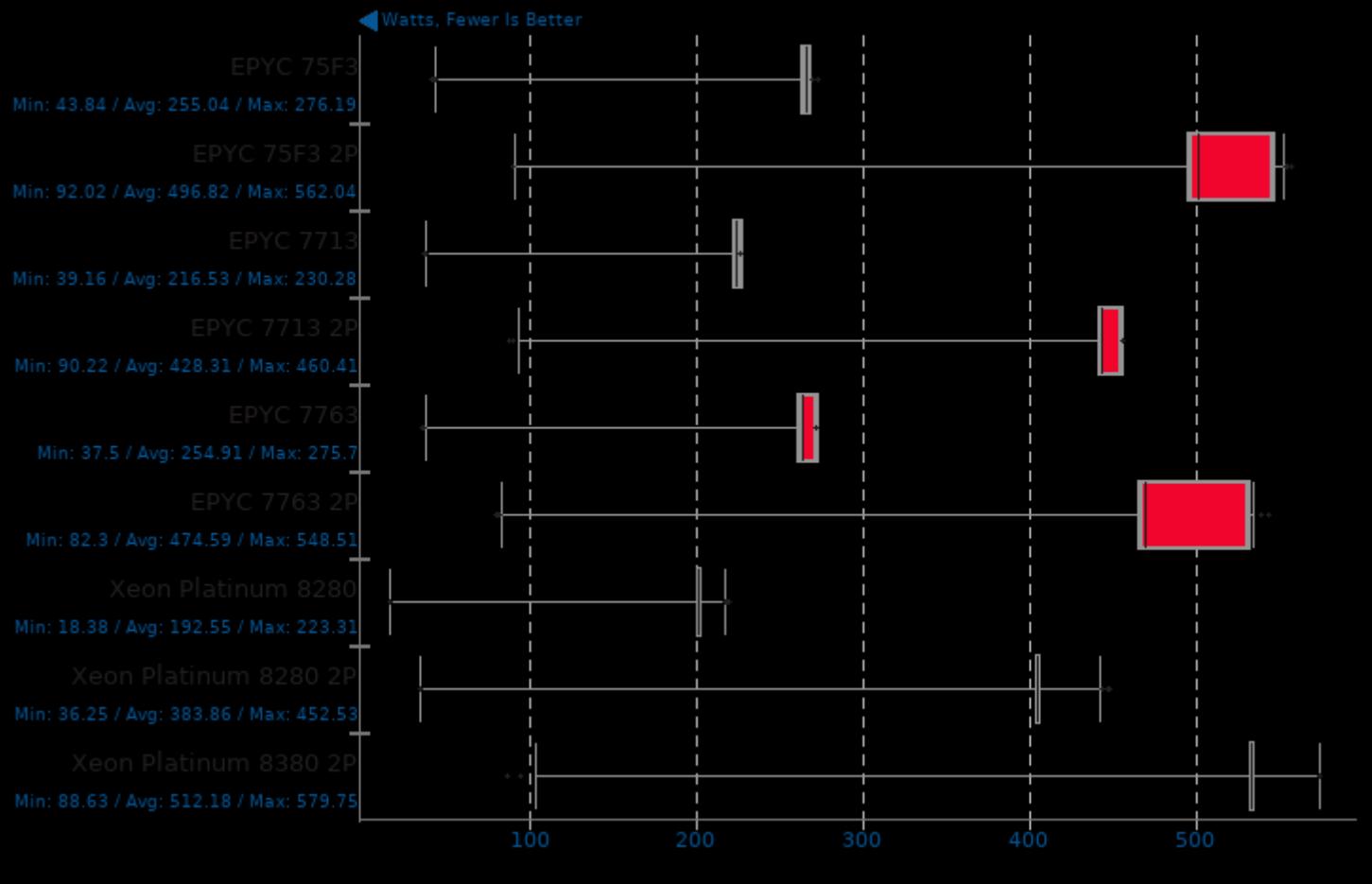
John The Ripper 1.9.0-jumbo-1

Test: MD5



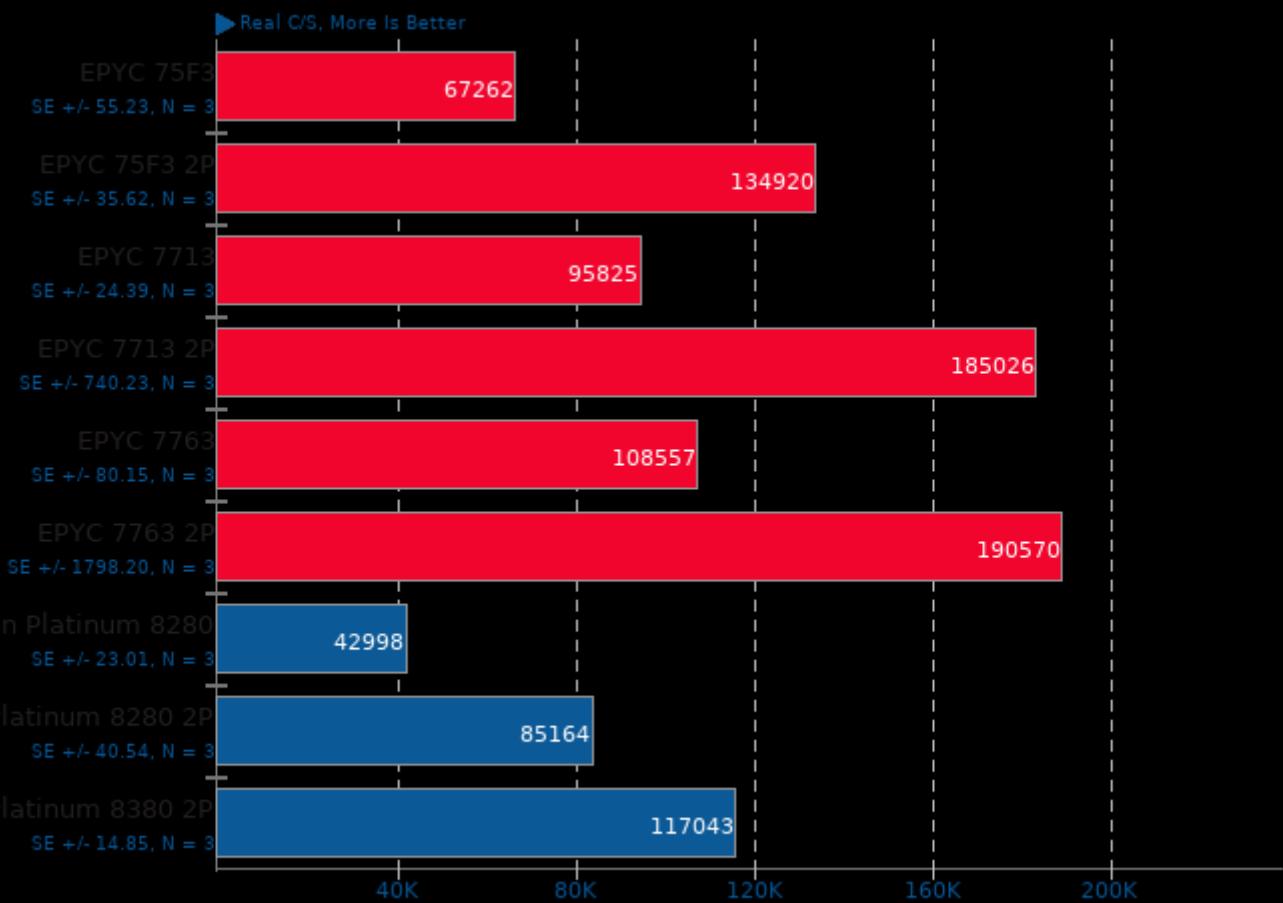
John The Ripper 1.9.0-jumbo-1

CPU Power Consumption Monitor



John The Ripper 1.9.0-jumbo-1

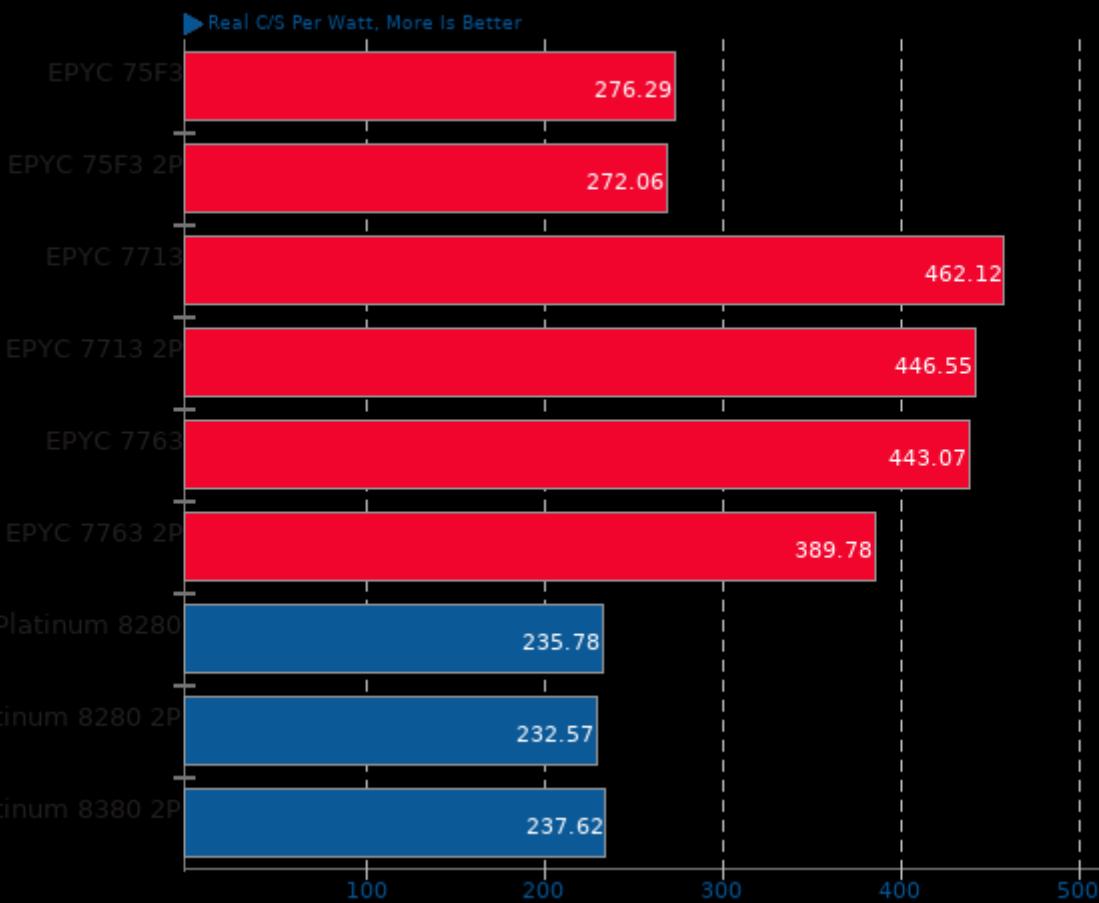
Test: Blowfish



1. (CC) gcc options: -m64 -lssl -lcrypto -fopenmp -lgmp -pthread -lm -lz -ldl -lcrypt -lbz2

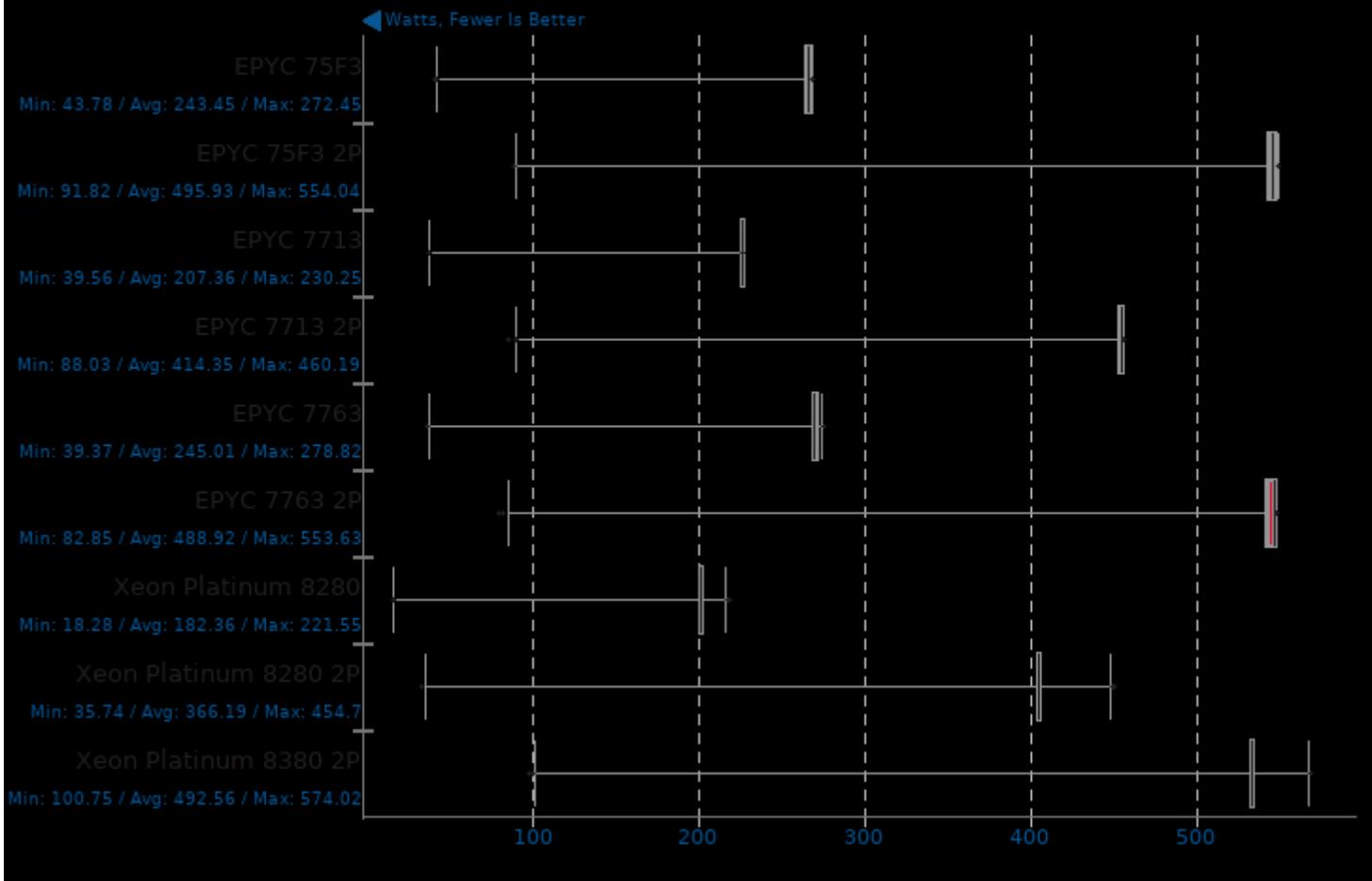
John The Ripper 1.9.0-jumbo-1

Test: Blowfish



John The Ripper 1.9.0-jumbo-1

CPU Power Consumption Monitor



Initial Intel Xeon Platinum 8380 2P Benchmarks

dav1d 0.8.1

Video Input: Summer Nature 4K

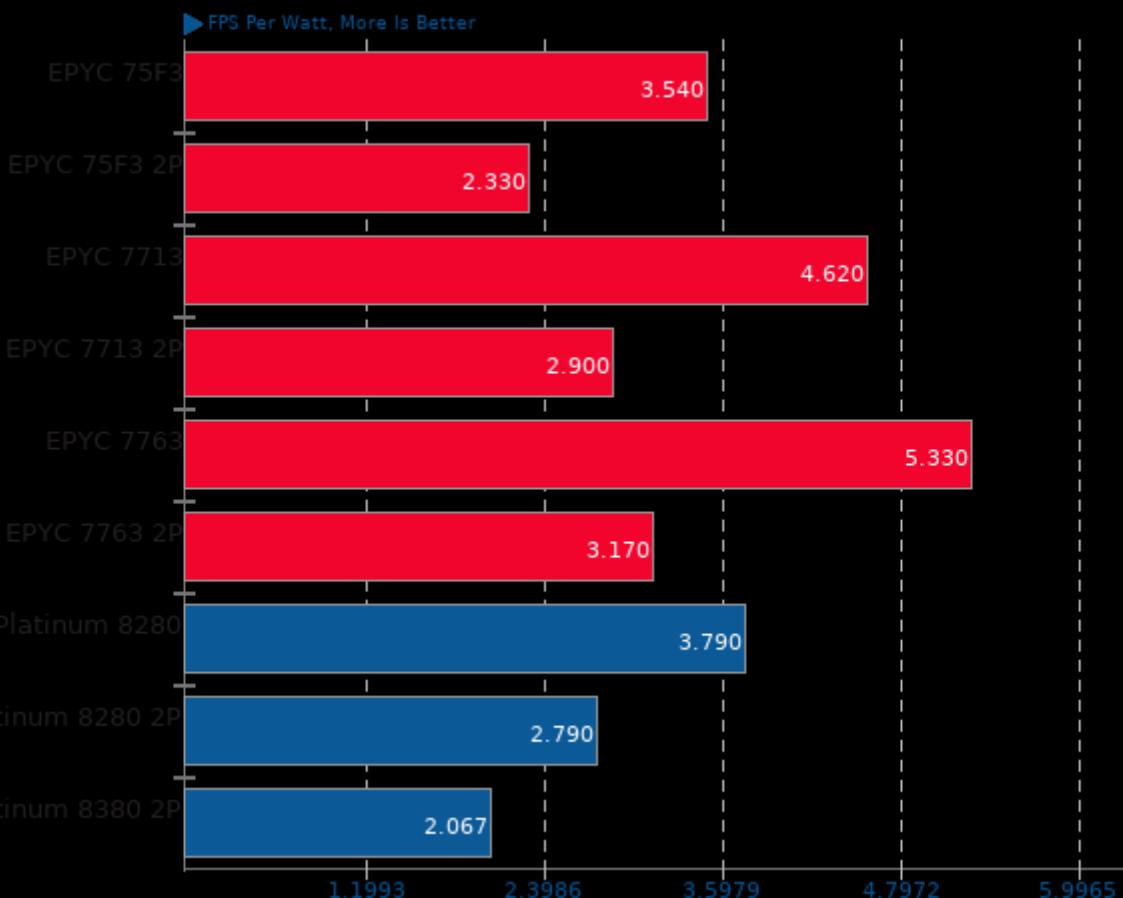


1. (CC) gcc options: -pthread

Initial Intel Xeon Platinum 8380 2P Benchmarks

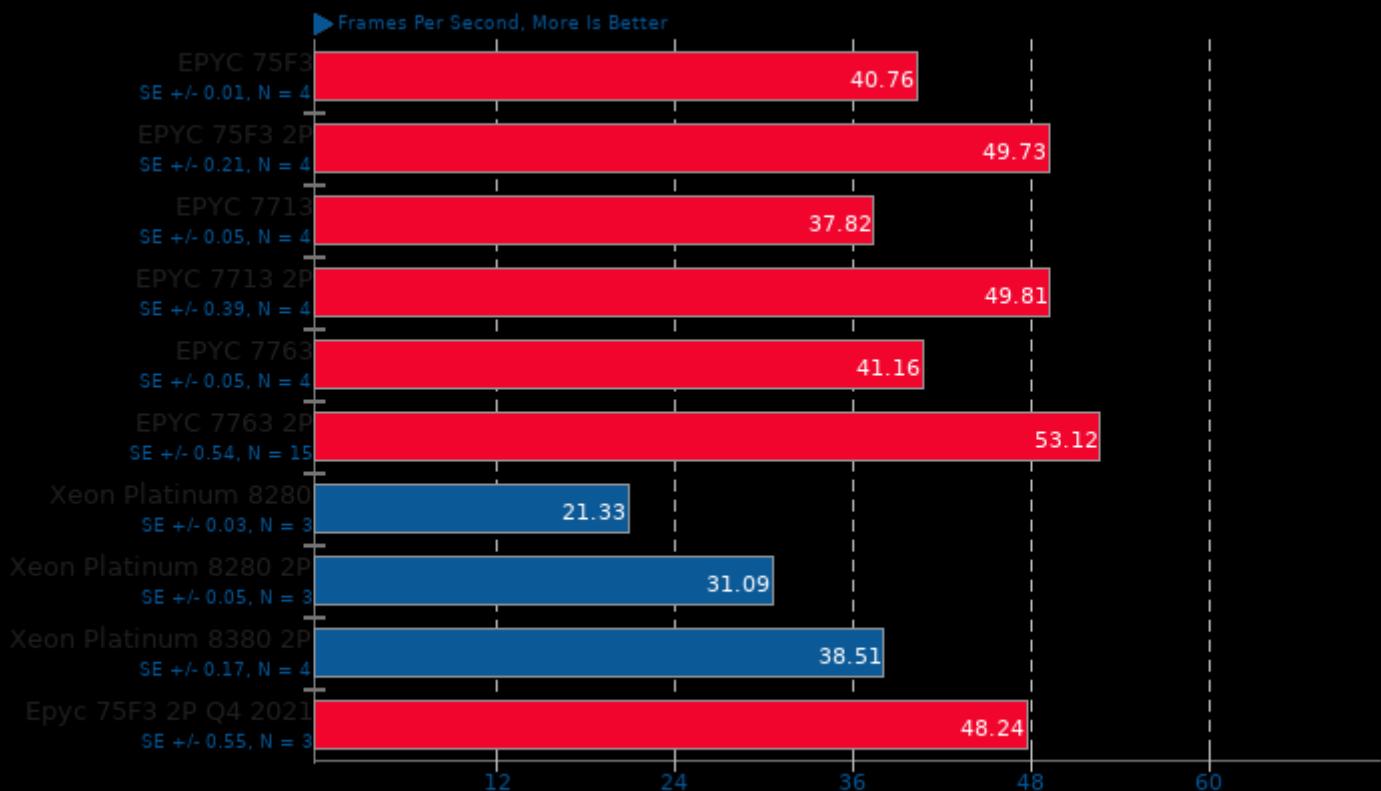
dav1d 0.8.1

Video Input: Summer Nature 4K



Kvazaar 2.0

Video Input: Bosphorus 4K - Video Preset: Very Fast



1. (CC) gcc options: -pthread -fno-tree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Initial Intel Xeon Platinum 8380 2P Benchmarks

SVT-AV1 0.8

Encoder Mode: Enc Mode 8 - Input: 1080p



1. (CXX) g++ options: -O3 -fcommon -fPIE -fPIC -pie

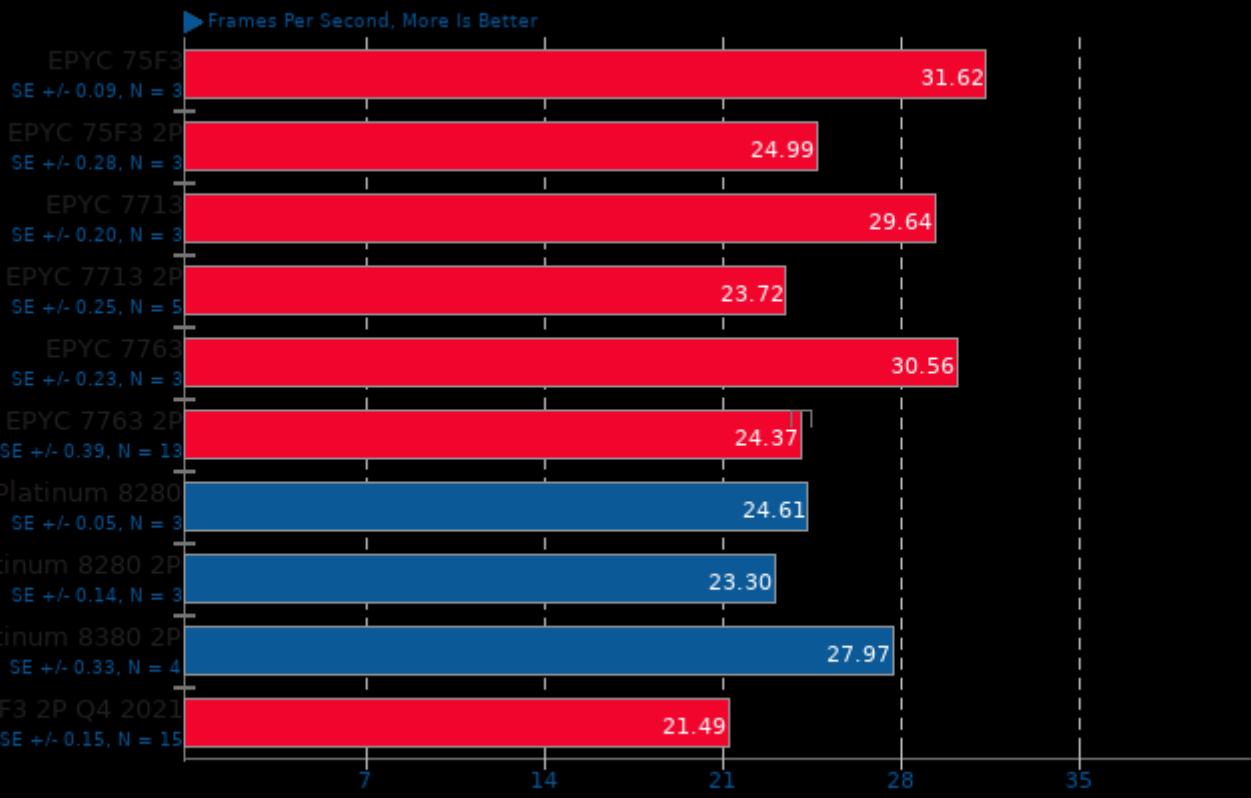
SVT-AV1 0.8

Encoder Mode: Enc Mode 8 - Input: 1080p



x265 3.4

Video Input: Bosphorus 4K



1. (CXX) g++ options: -O3 -rdynamic -lpthread -lrt -ldl -lnuma

x265 3.4

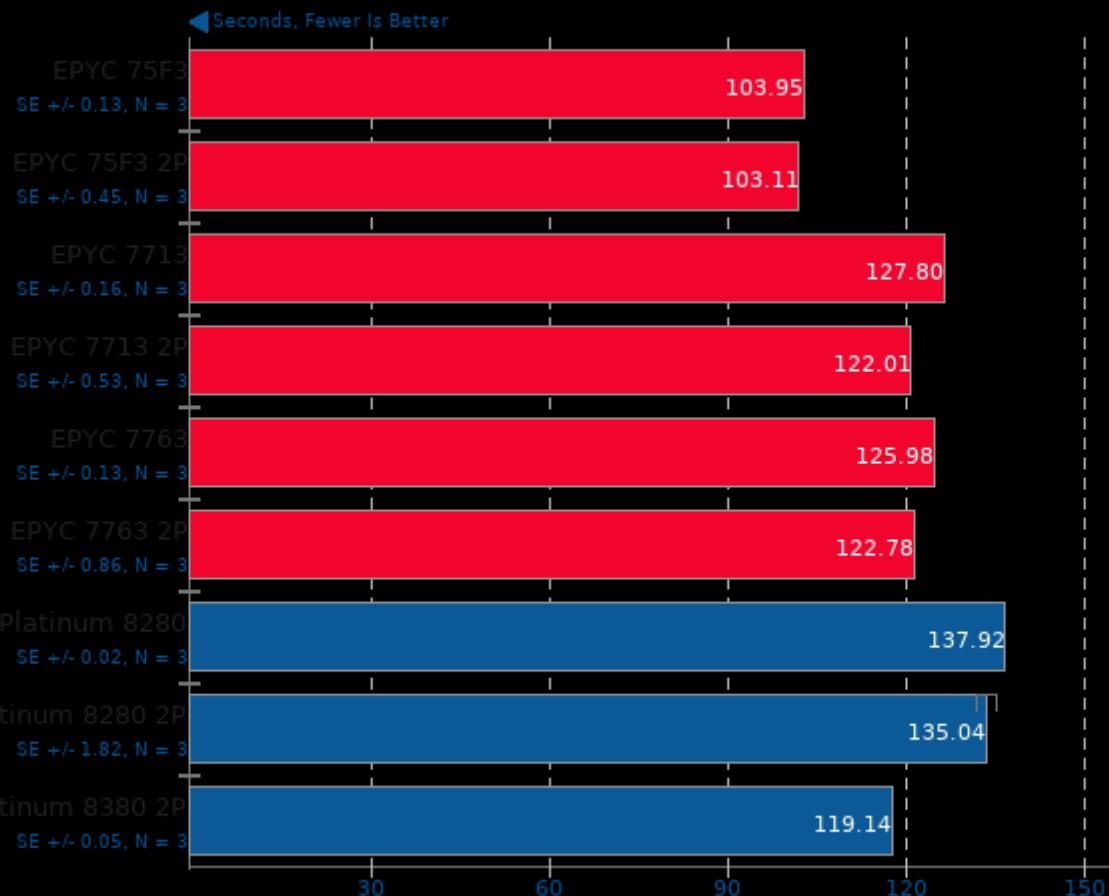
Video Input: Bosphorus 4K



Initial Intel Xeon Platinum 8380 2P Benchmarks

WebP2 Image Encode 20210126

Encode Settings: Quality 75, Compression Effort 7

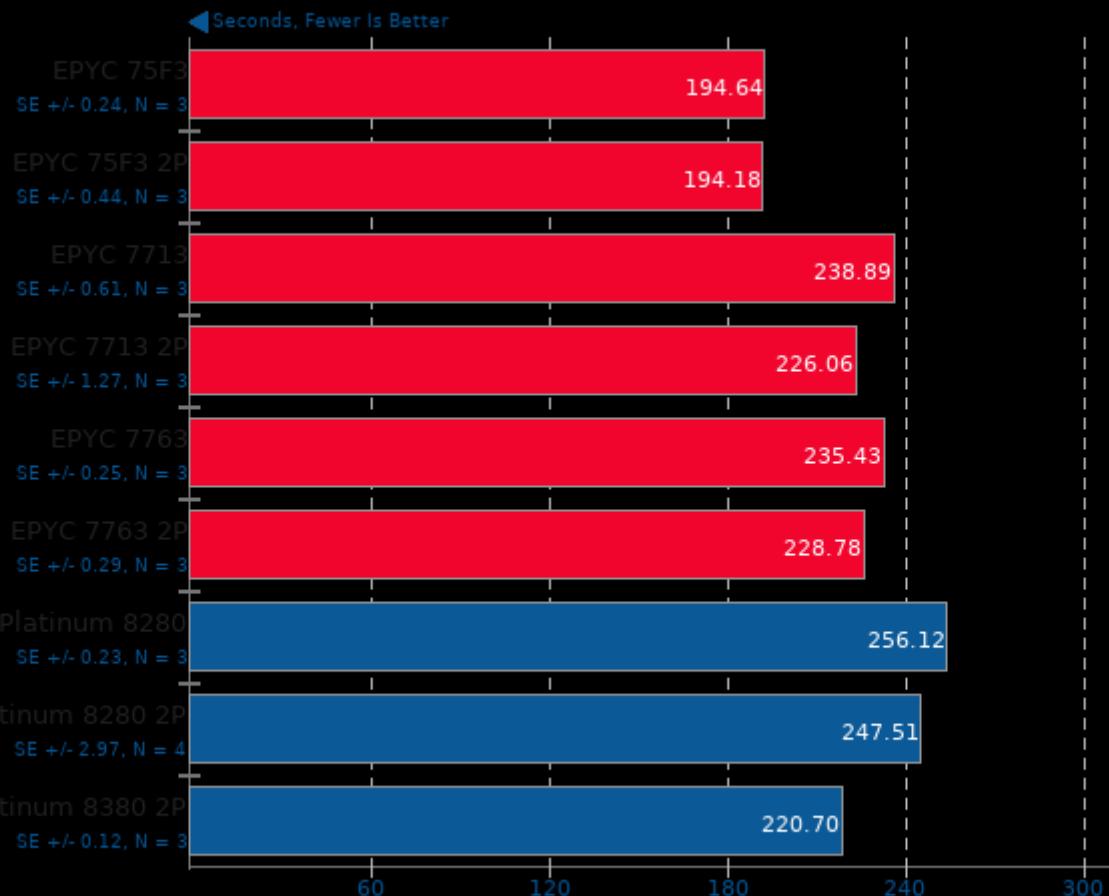


1. (CXX) g++ options: -msse4.2 -fno-rtti -O3 -rdynamic -lpthread -ljpeg -lgif -lwebp -lwebpdemux

Initial Intel Xeon Platinum 8380 2P Benchmarks

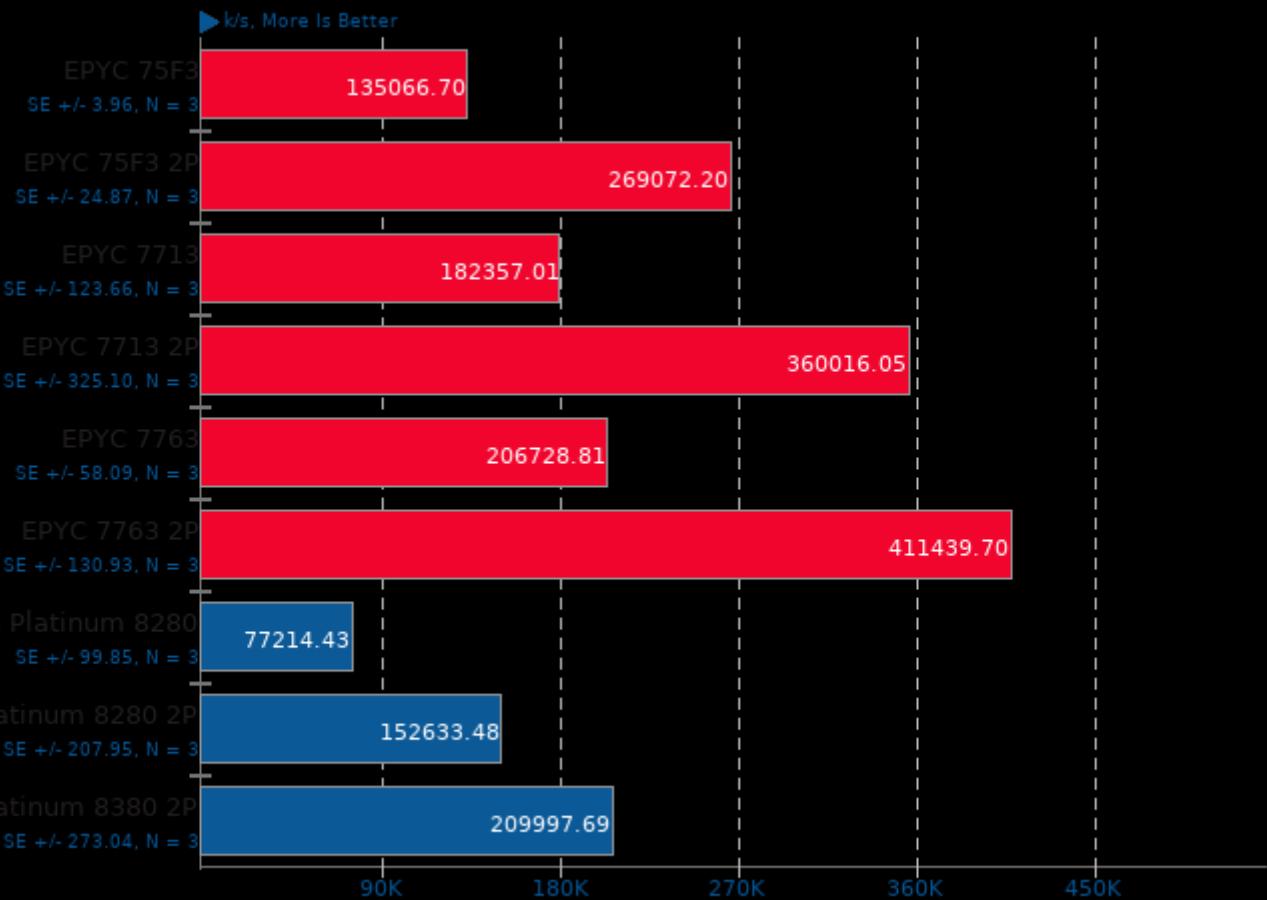
WebP2 Image Encode 20210126

Encode Settings: Quality 95, Compression Effort 7



1. (CXX) g++ options: -msse4.2 -fno-rtti -O3 -rdynamic -lpthread -ljpeg -lgif -lwebp -lwebpdemux

Aircrack-ng 1.5.2



1. (CXX) g++ options: -O3 -fvisibility=hidden -fasm=intel -fcommon -rdynamic -lpthread -lz -lcrypto -lhwloc -ldl -lm -pthread

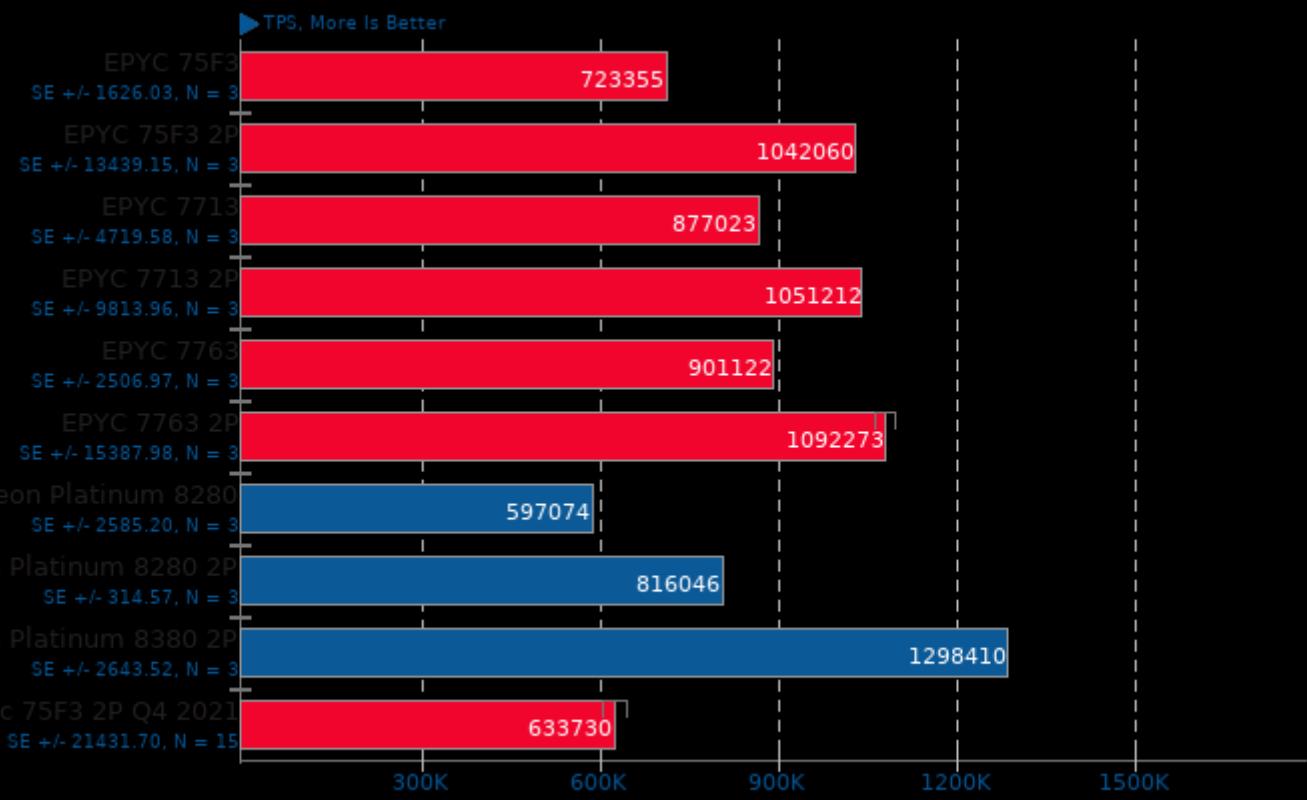
Aircrack-ng 1.5.2



Initial Intel Xeon Platinum 8380 2P Benchmarks

PostgreSQL pgbench 13.0

Scaling Factor: 100 - Clients: 100 - Mode: Read Only

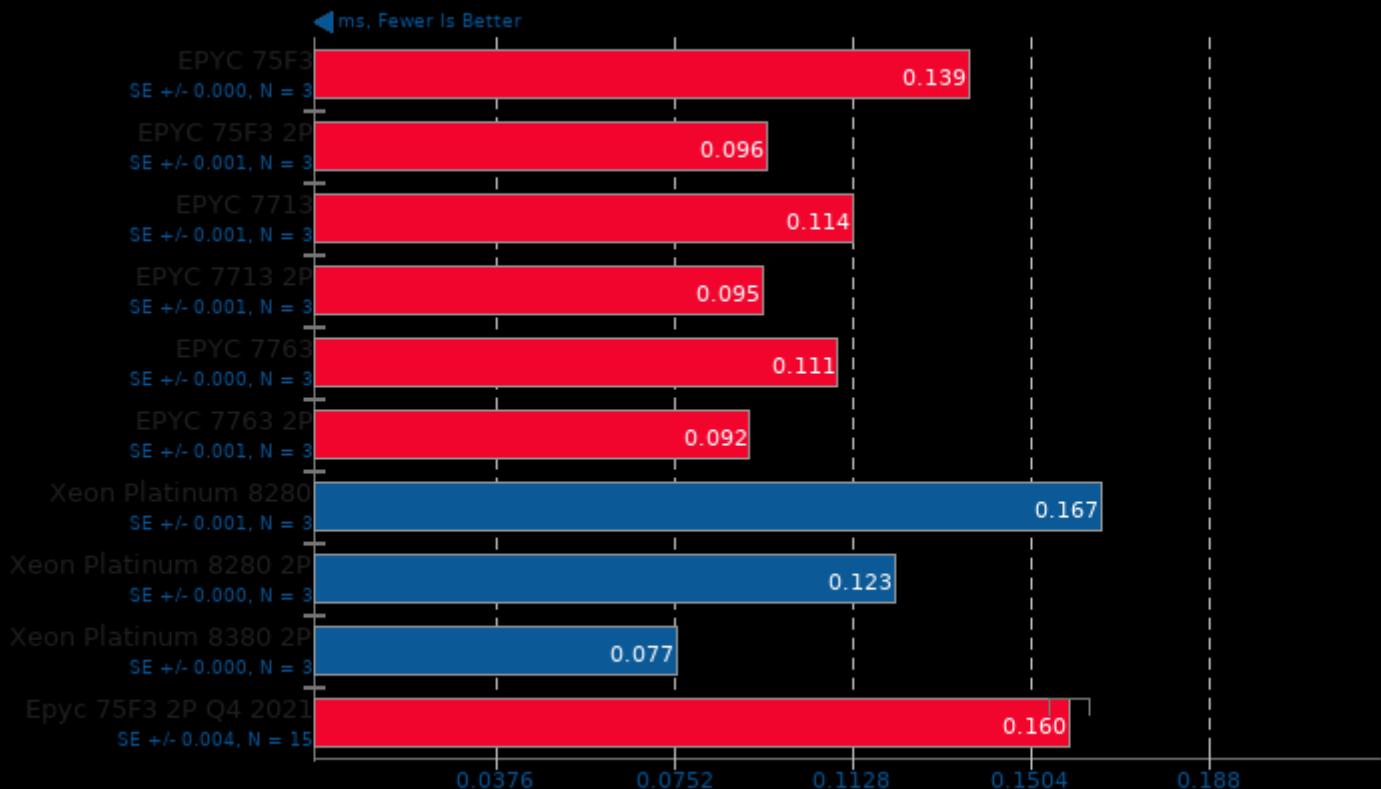


1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lpgcommon -lpgport -lpq -lpthread -lrt -ldl -lm

Initial Intel Xeon Platinum 8380 2P Benchmarks

PostgreSQL pgbench 13.0

Scaling Factor: 100 - Clients: 100 - Mode: Read Only - Average Latency

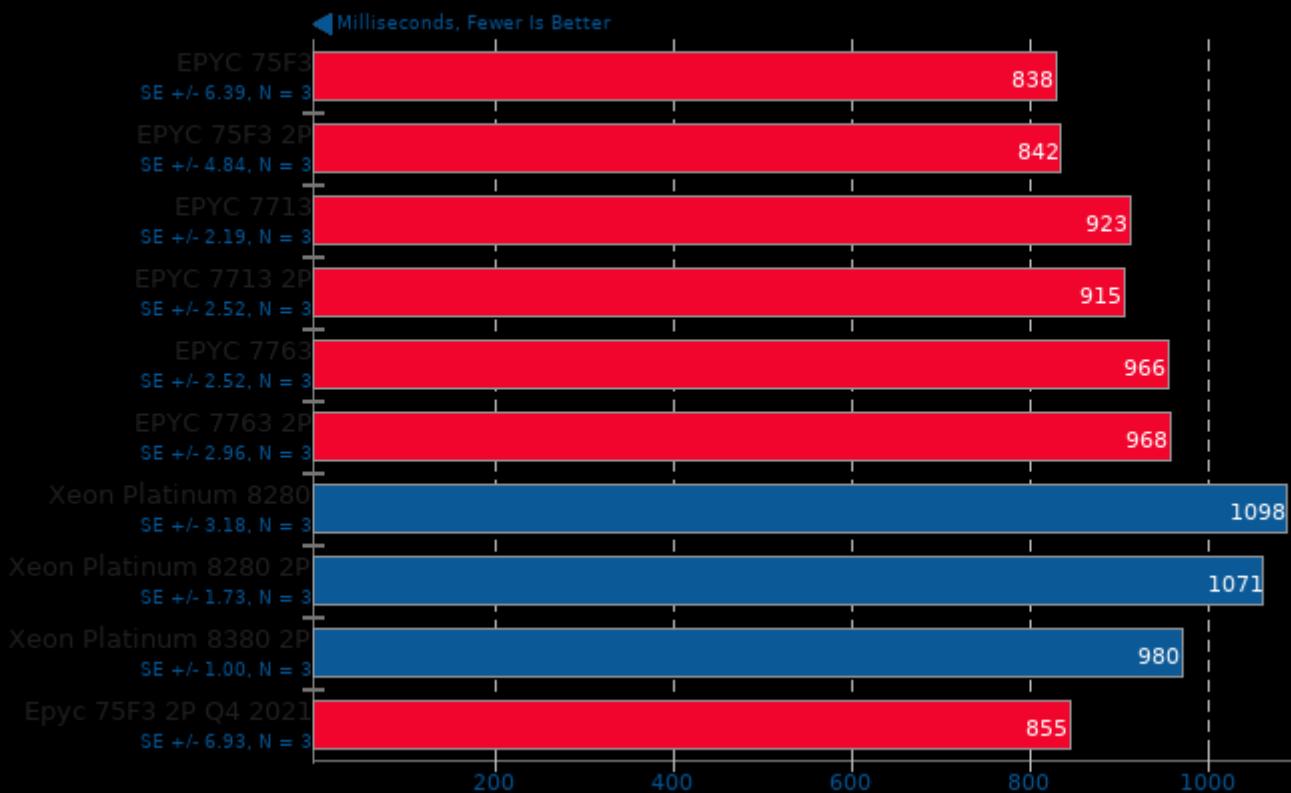


1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lpgcommon -lpgport -lpq -lpthread -lrt -ldl -lm

Initial Intel Xeon Platinum 8380 2P Benchmarks

PyBench 2018-02-16

Total For Average Test Times



PyPerformance 1.0.0

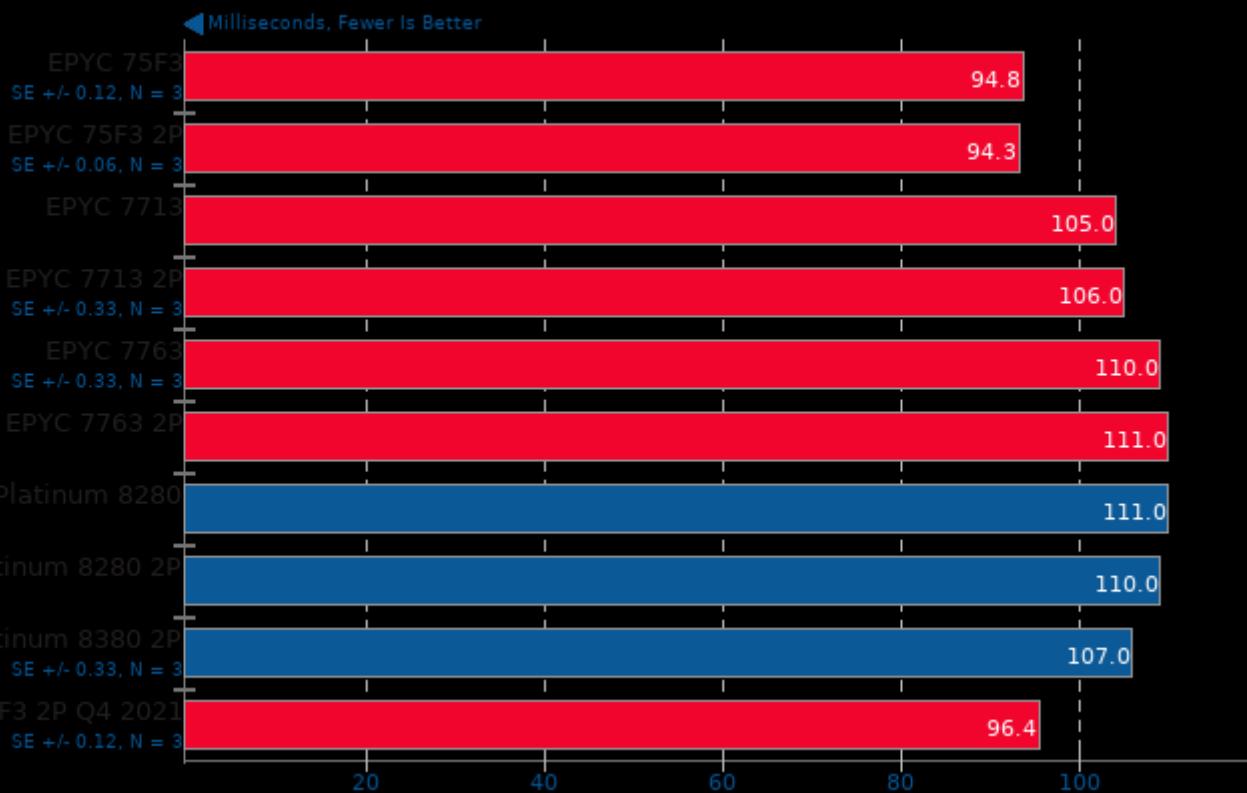
Benchmark: crypto_pyaes



Initial Intel Xeon Platinum 8380 2P Benchmarks

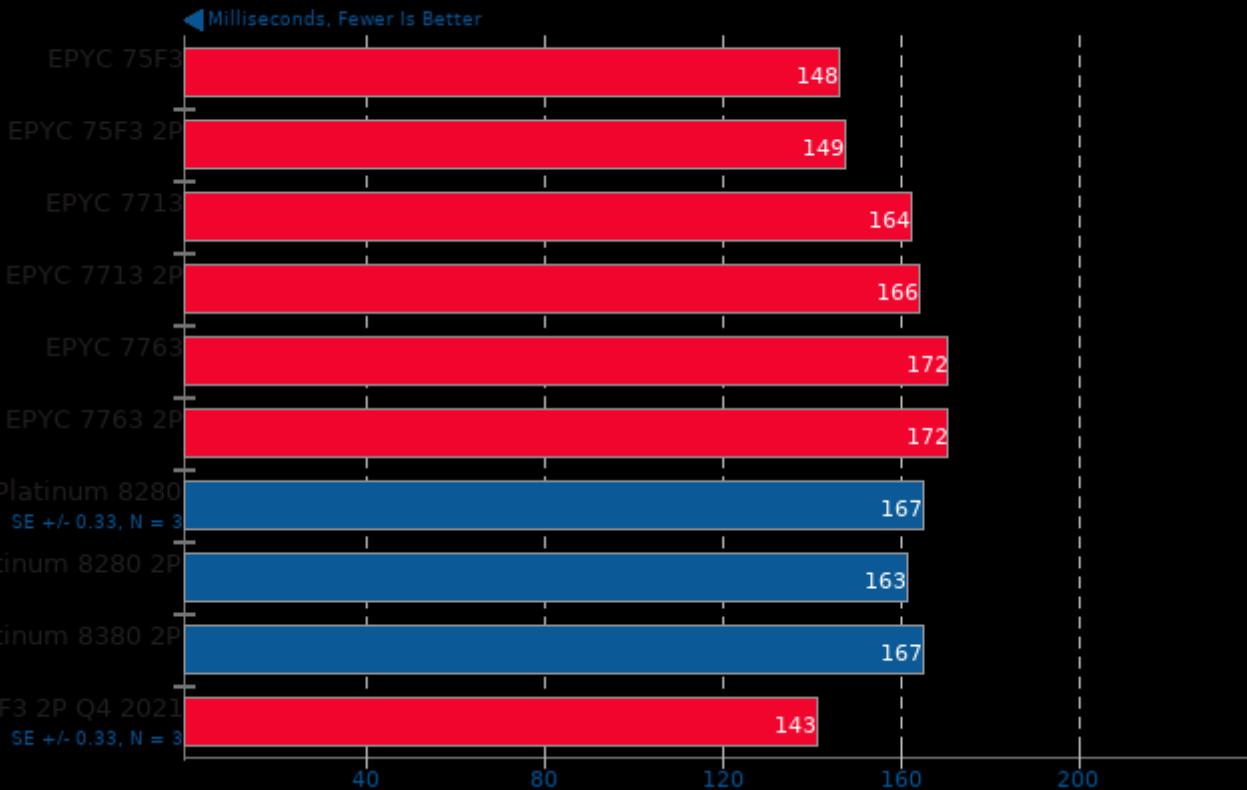
PyPerformance 1.0.0

Benchmark: float



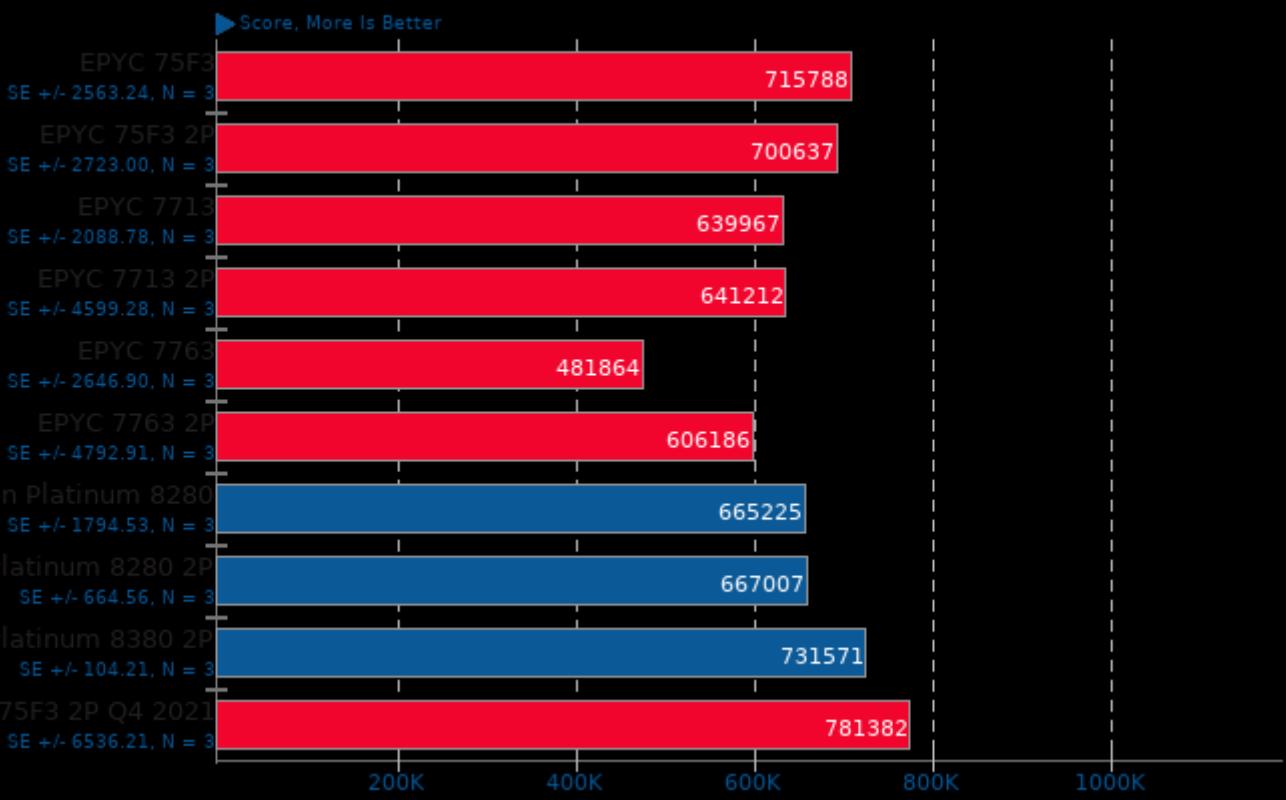
PyPerformance 1.0.0

Benchmark: regex_compile



PHPBench 0.8.1

PHP Benchmark Suite



PHPBench 0.8.1

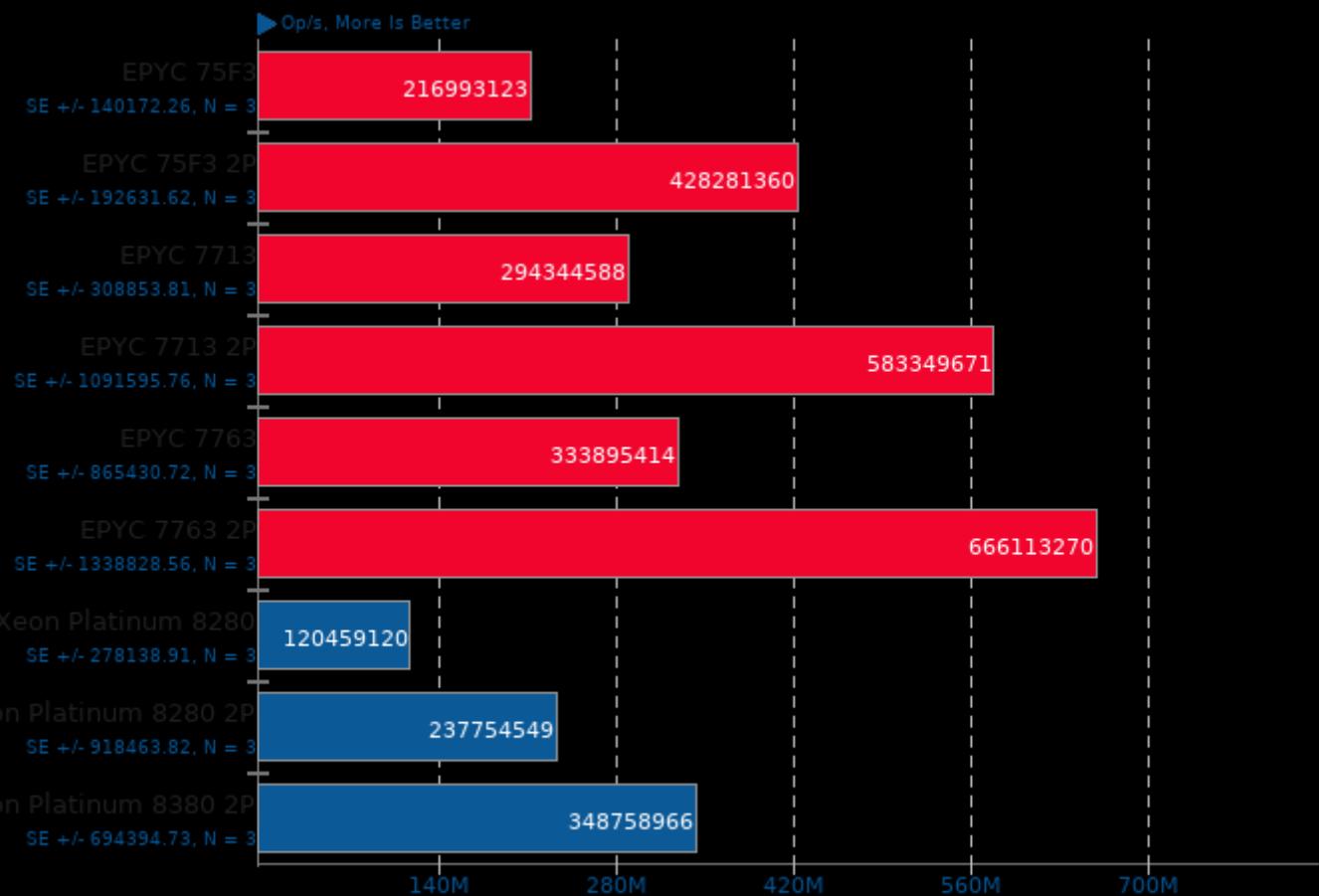
PHP Benchmark Suite



Initial Intel Xeon Platinum 8380 2P Benchmarks

Facebook RocksDB 6.3.6

Test: Random Read



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fno-built-in-memcmp -fno-rtti -rdynamic -lpthread

Facebook RocksDB 6.3.6

Test: Random Read



Facebook RocksDB 6.3.6

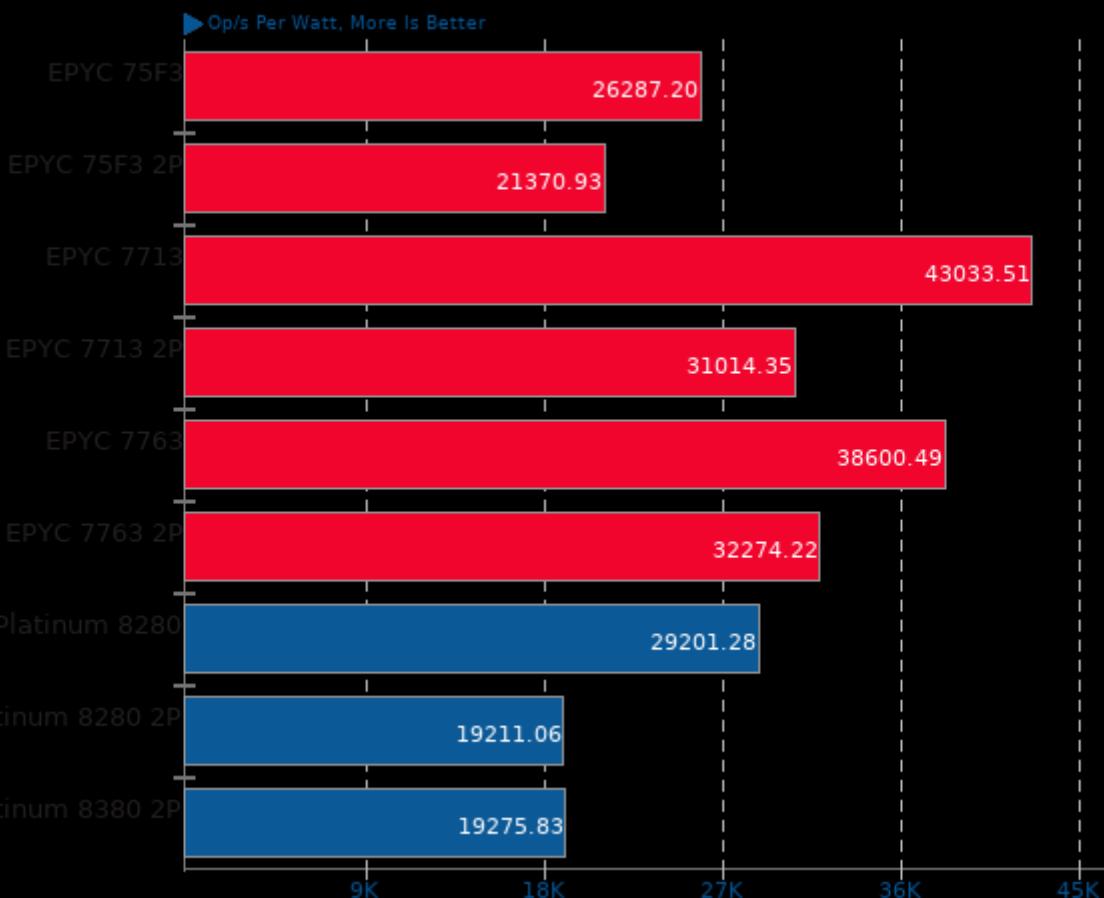
Test: Read While Writing



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fno-built-in-memcmp -fno-rtti -rdynamic -lpthread

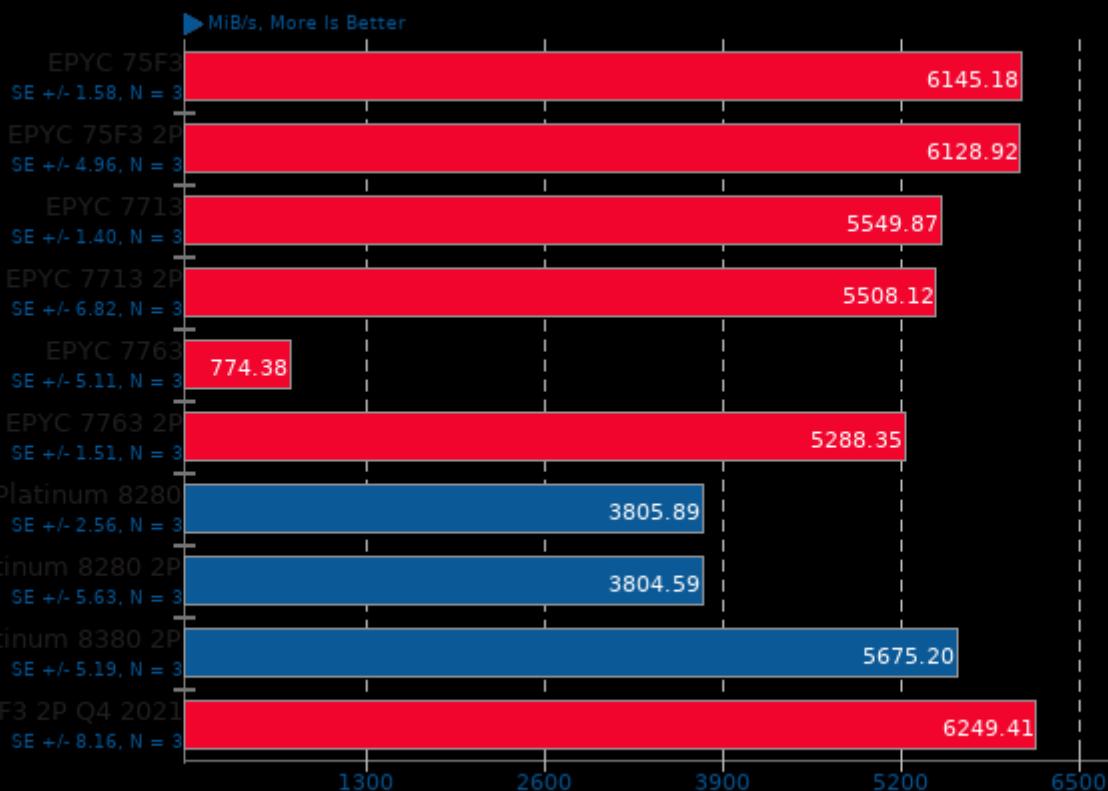
Facebook RocksDB 6.3.6

Test: Read While Writing



Botan 2.13.0

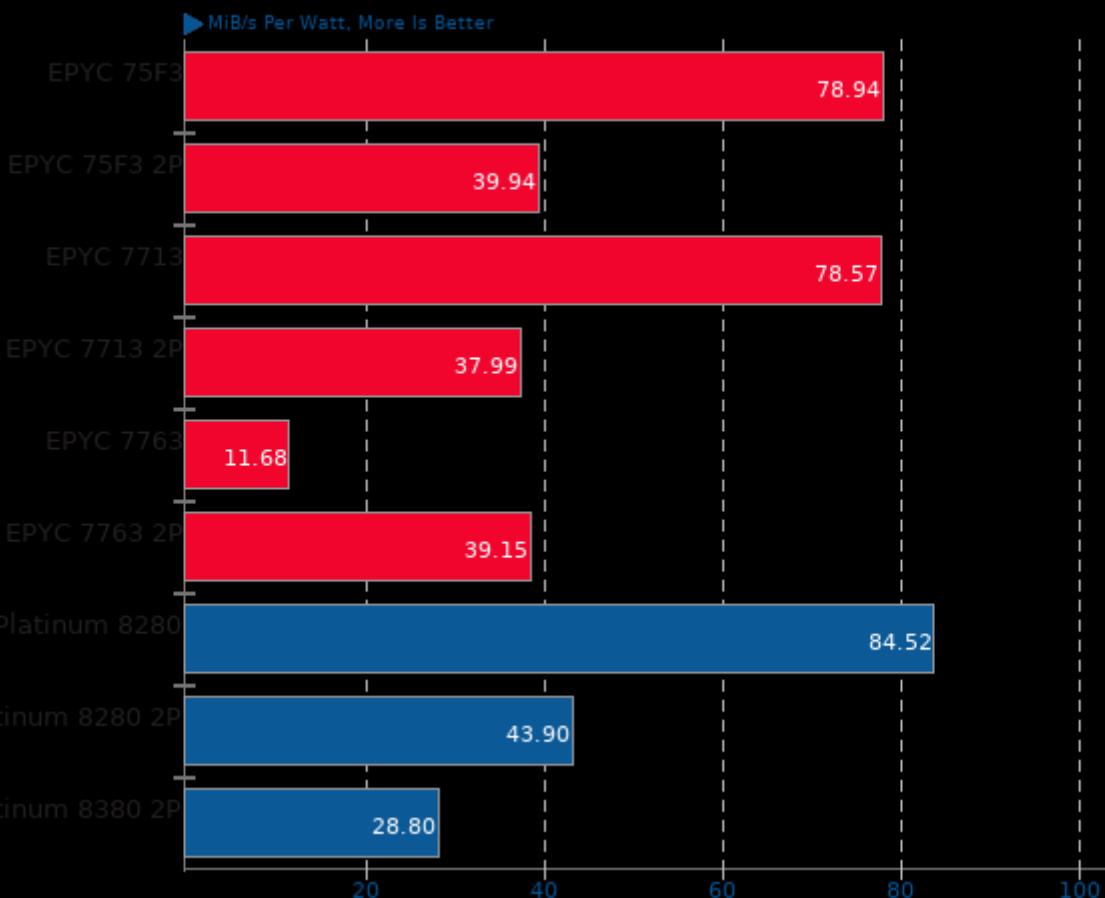
Test: AES-256



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

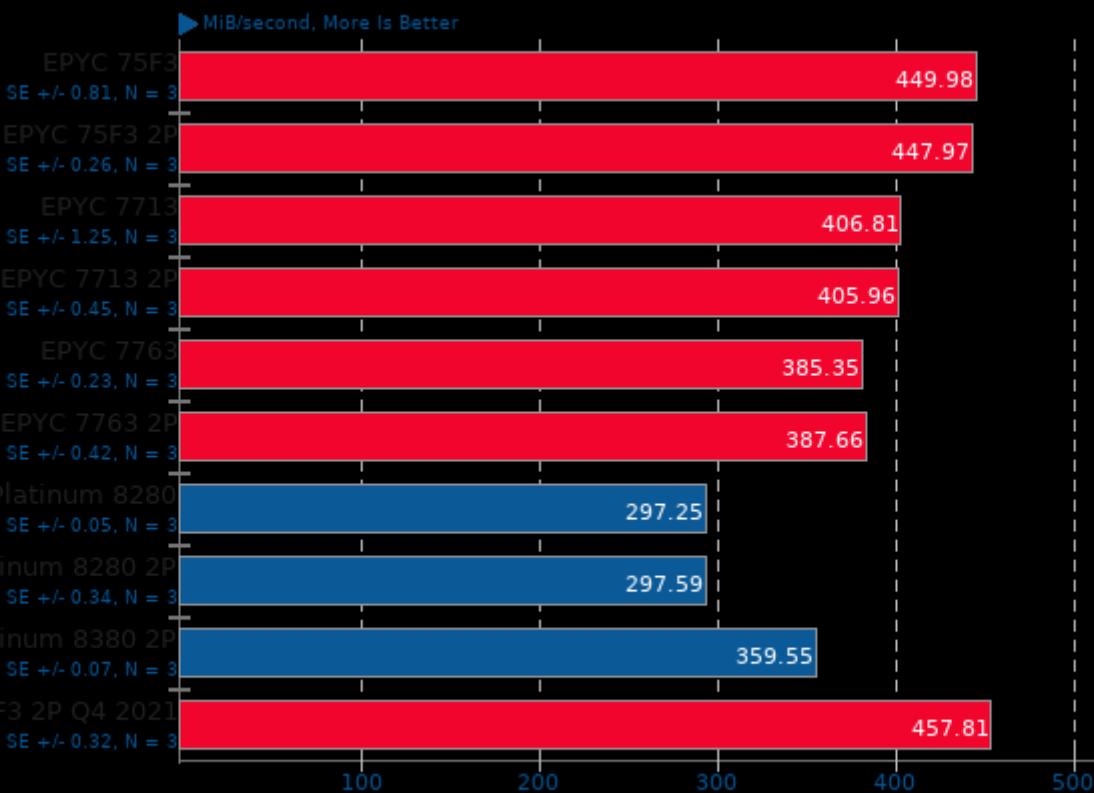
Botan 2.13.0

Test: AES-256



Crypto++ 8.2

Test: Unkeyed Algorithms



1. (CXX) g++ options: -g2 -O3 -fPIC -pthread -pipe

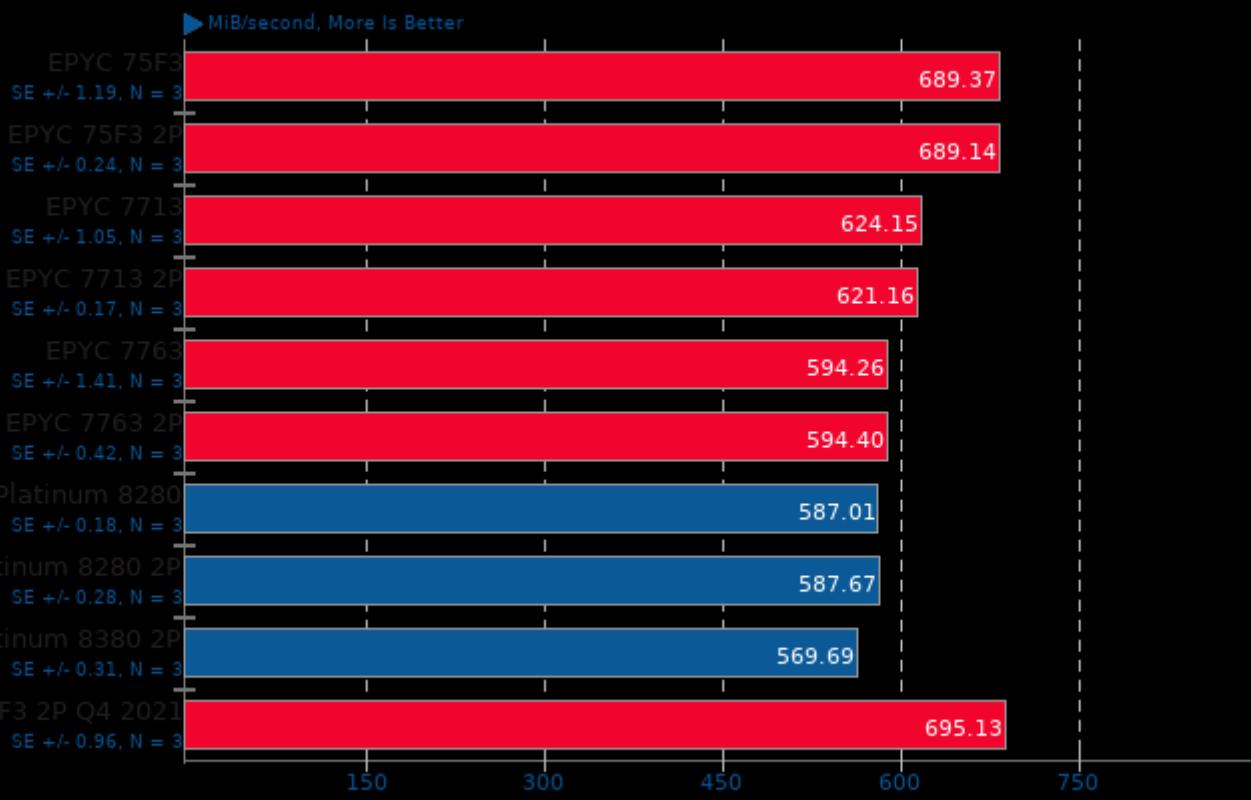
Crypto++ 8.2

Test: Unkeyed Algorithms



Crypto++ 8.2

Test: Keyed Algorithms



1. (CXX) g++ options: -g2 -O3 -fPIC -pthread -pipe

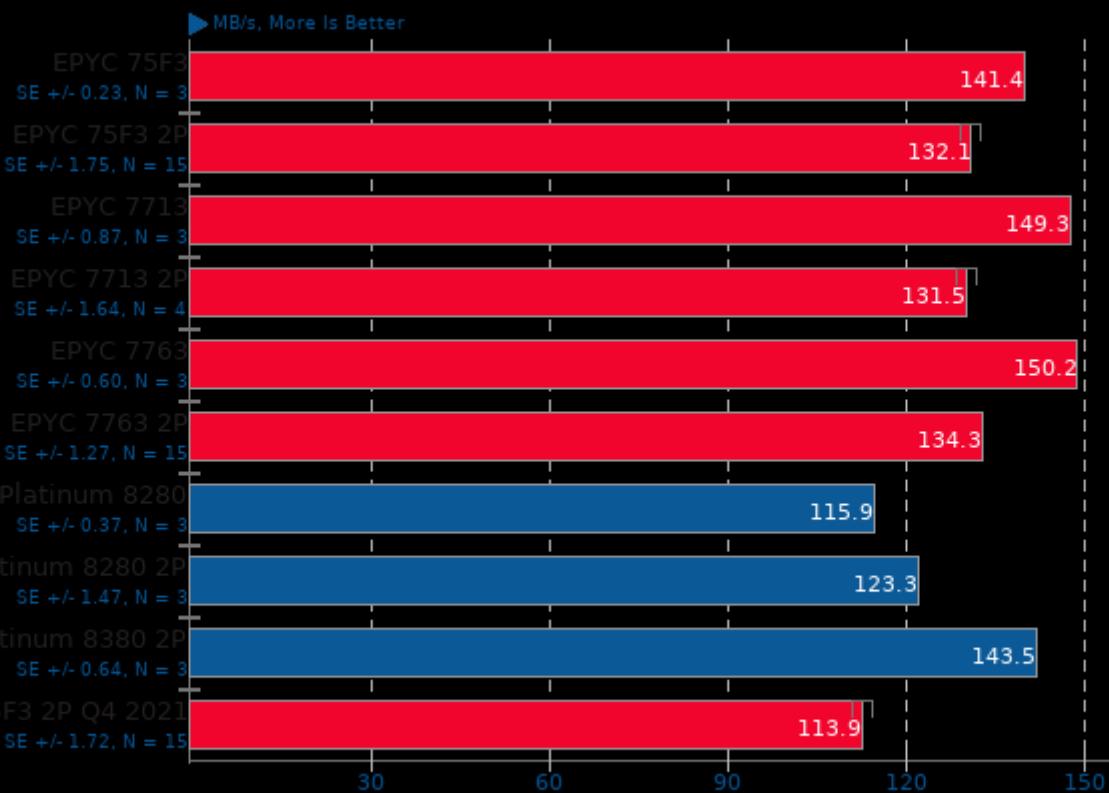
Crypto++ 8.2

Test: Keyed Algorithms



Zstd Compression 1.4.5

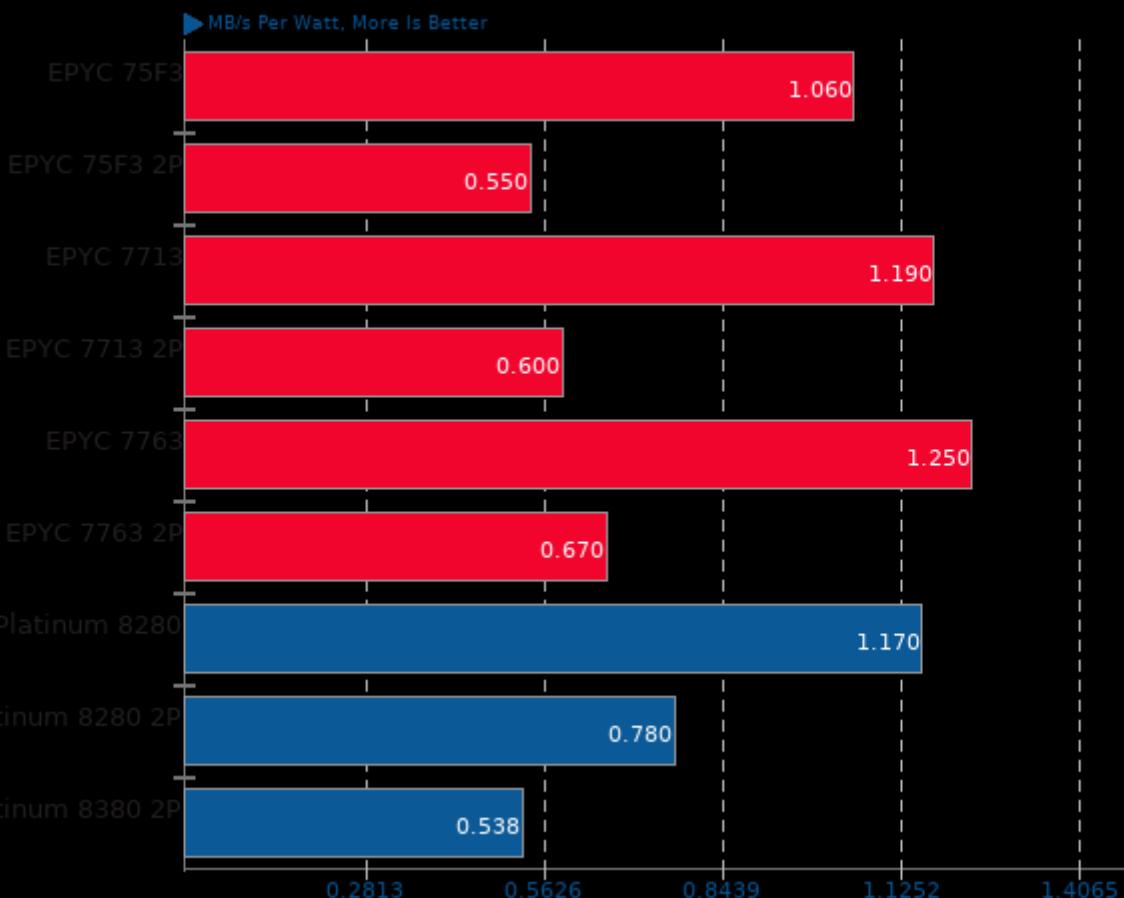
Compression Level: 19



1. (CC) gcc options: -O3 -pthread -lz -lzma

Zstd Compression 1.4.5

Compression Level: 19



7-Zip Compression 16.02

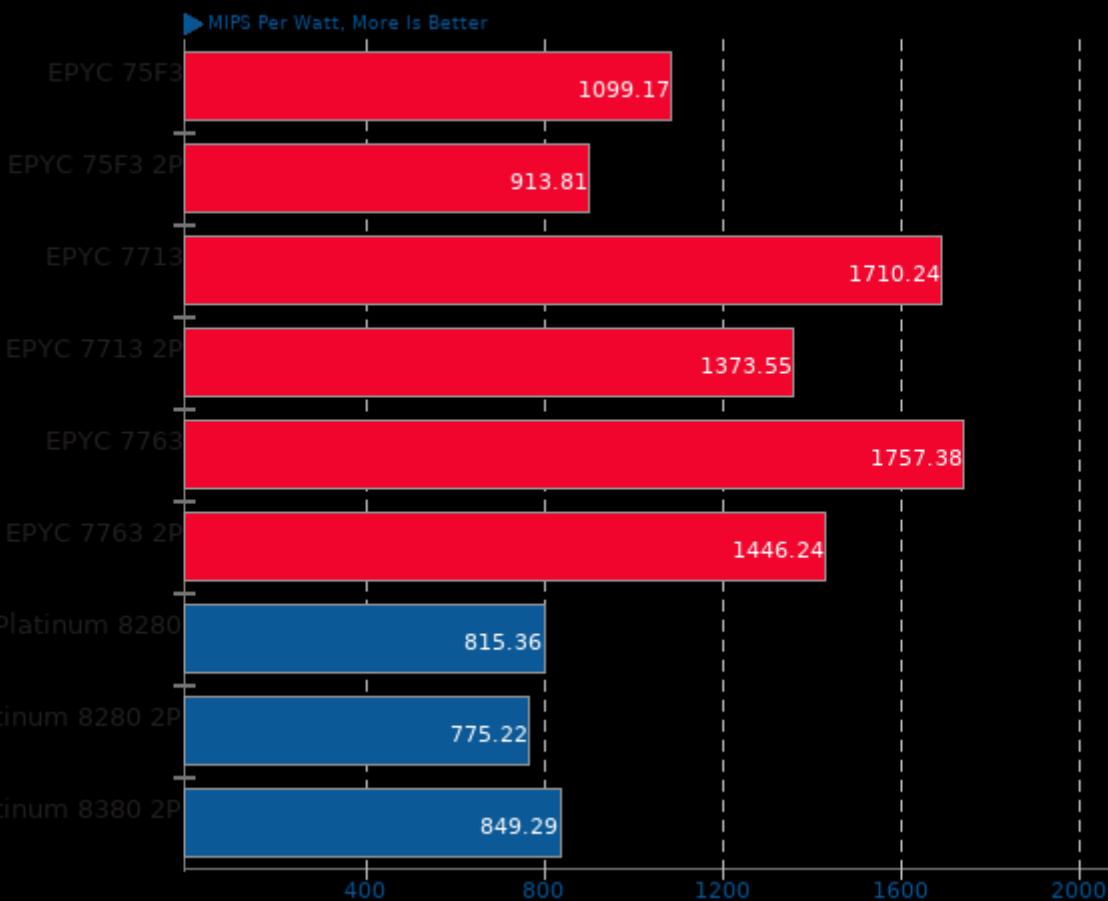
Compress Speed Test



1. (CXX) g++ options: -pipe -lpthread

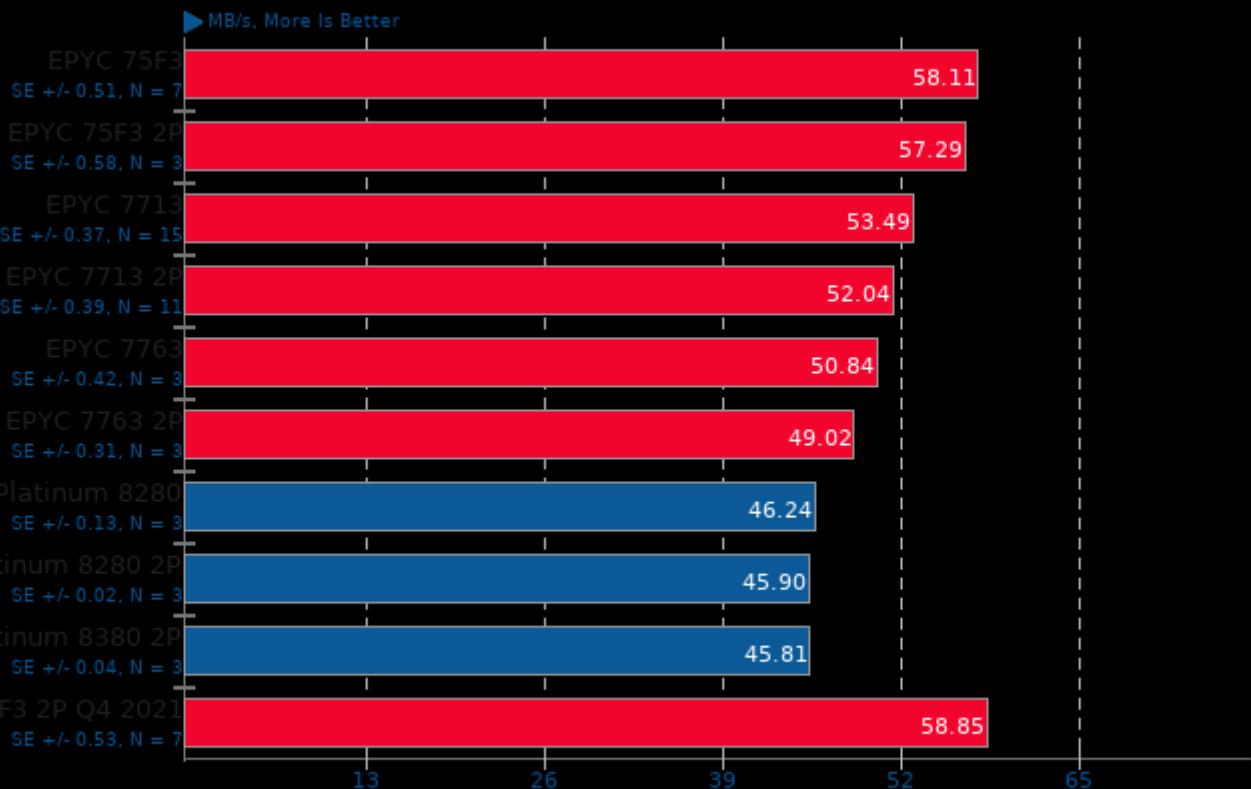
7-Zip Compression 16.02

Compress Speed Test



LZ4 Compression 1.9.3

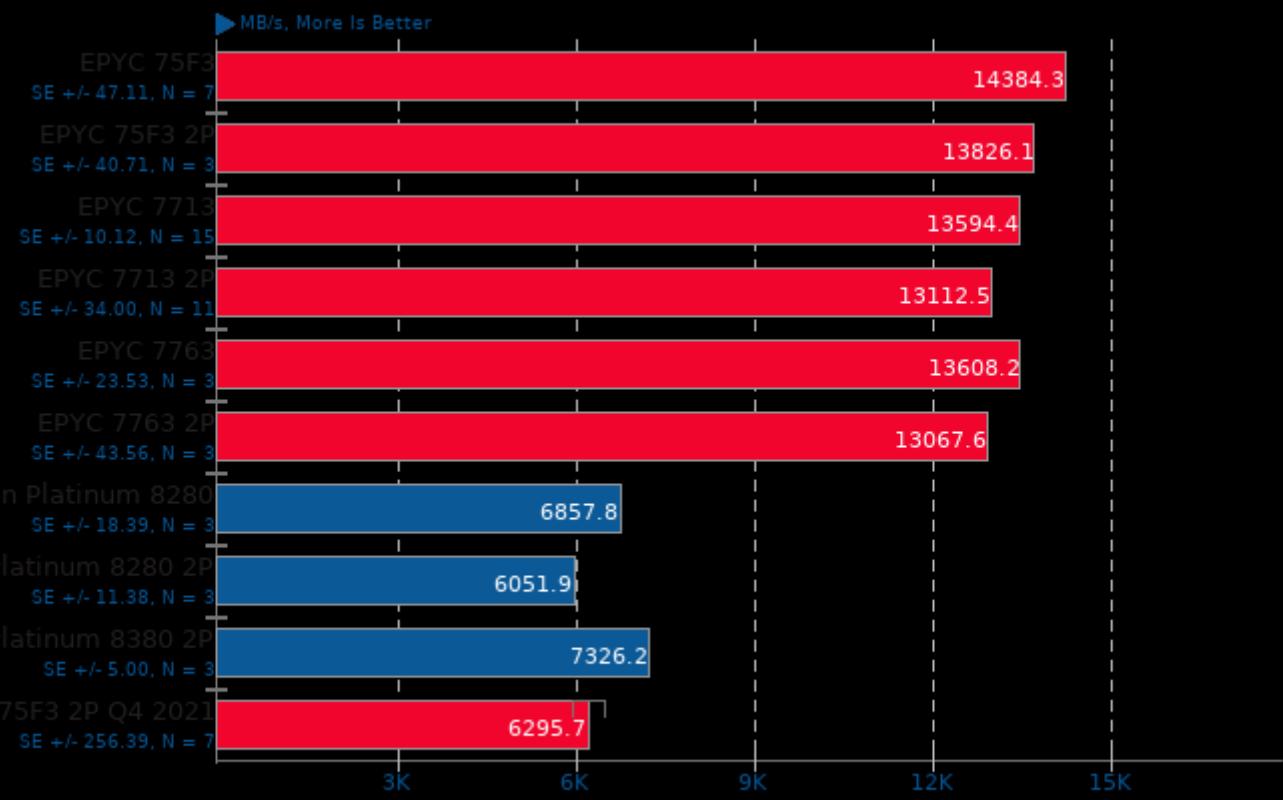
Compression Level: 9 - Compression Speed



1. (CC) gcc options: -O3

LZ4 Compression 1.9.3

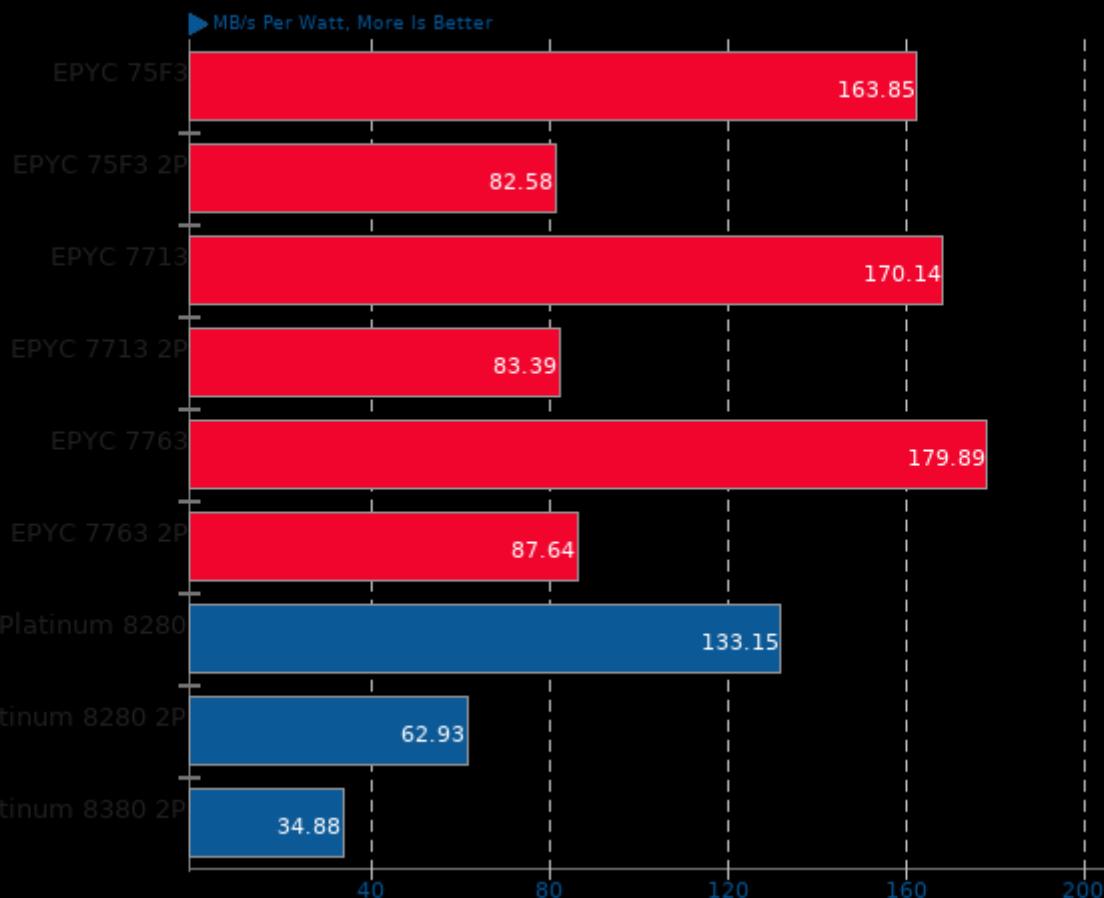
Compression Level: 9 - Decompression Speed



1. (CC) gcc options: -O3

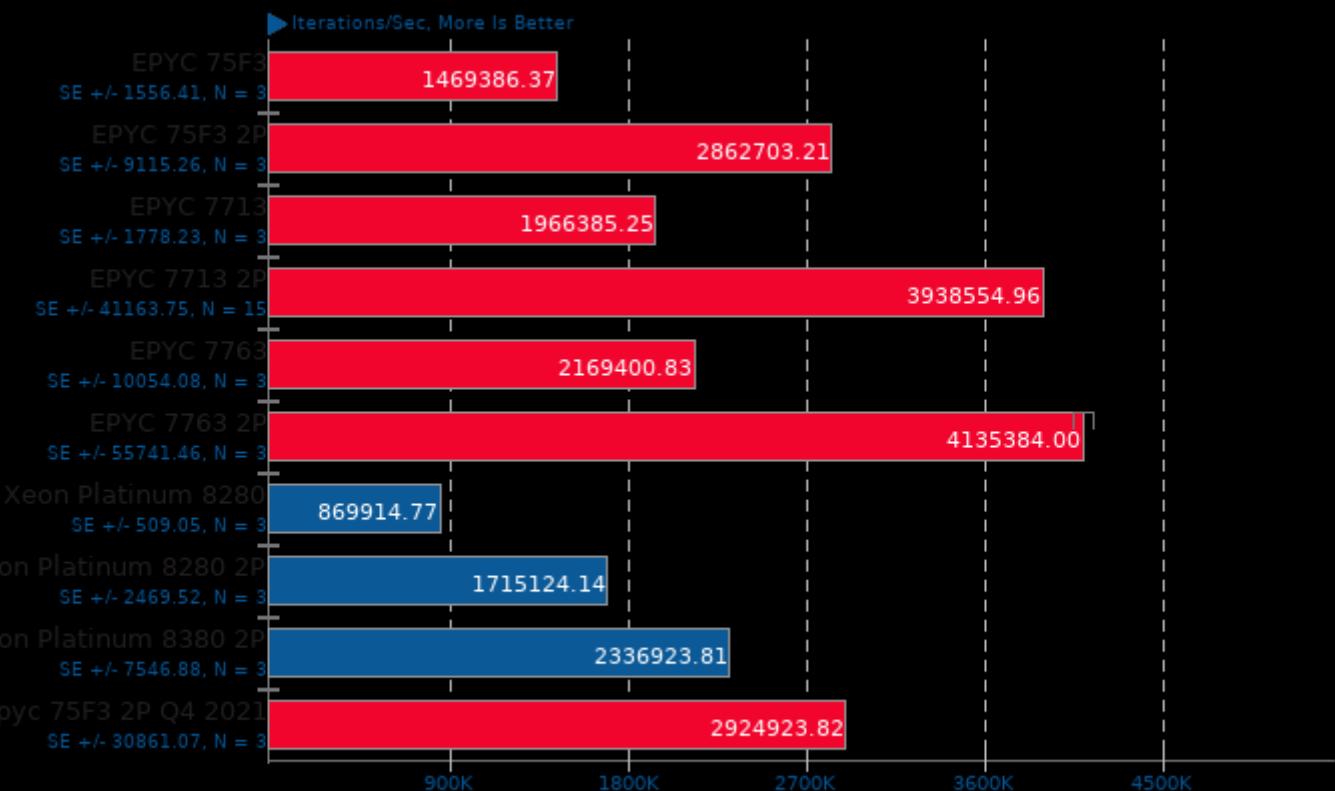
LZ4 Compression 1.9.3

Compression Level: 9 - Decompression Speed



Coremark 1.0

CoreMark Size 666 - Iterations Per Second



1. (CC) gcc options: -O2 -fintc -firt

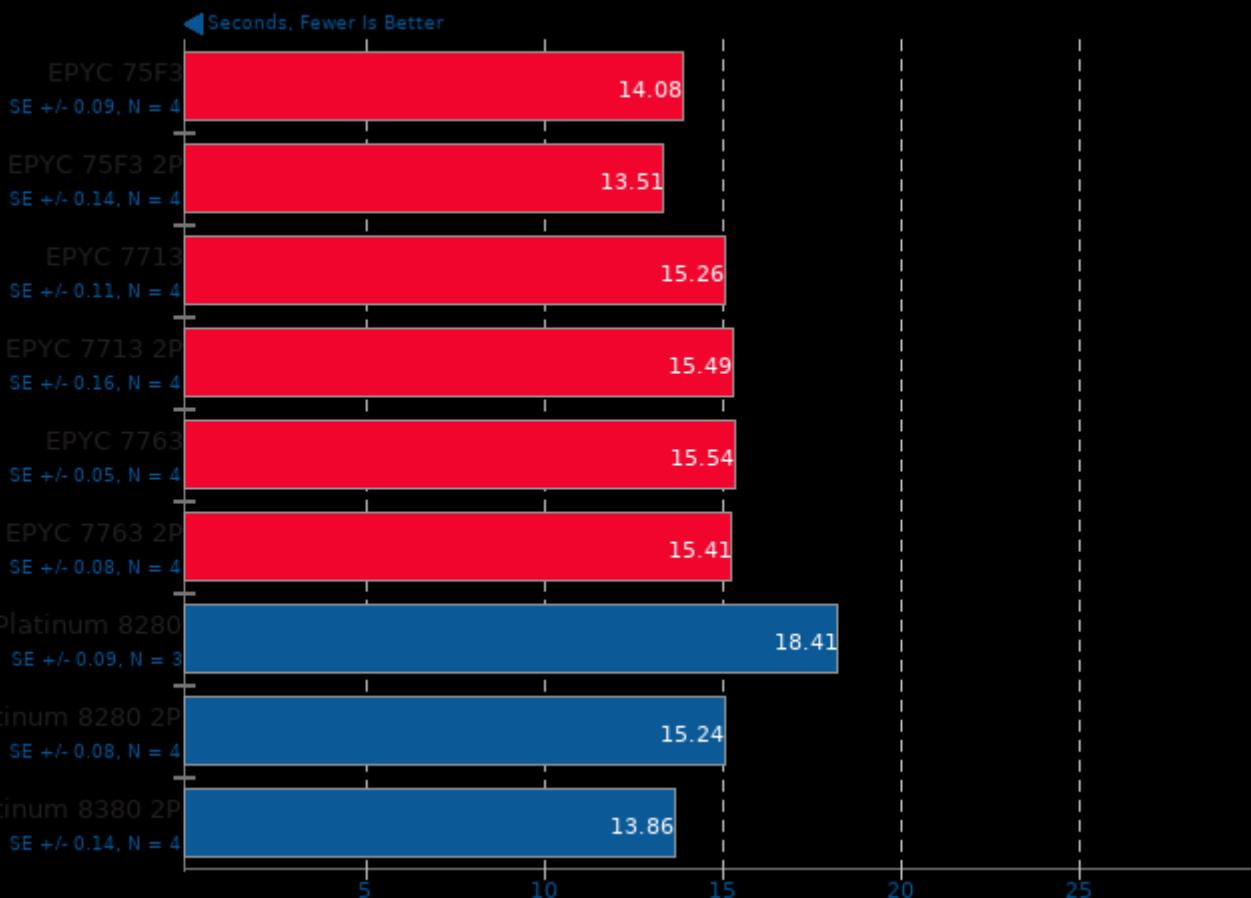
Coremark 1.0

CoreMark Size 666 - Iterations Per Second



OCRMyPDF 9.6.0+dfsg

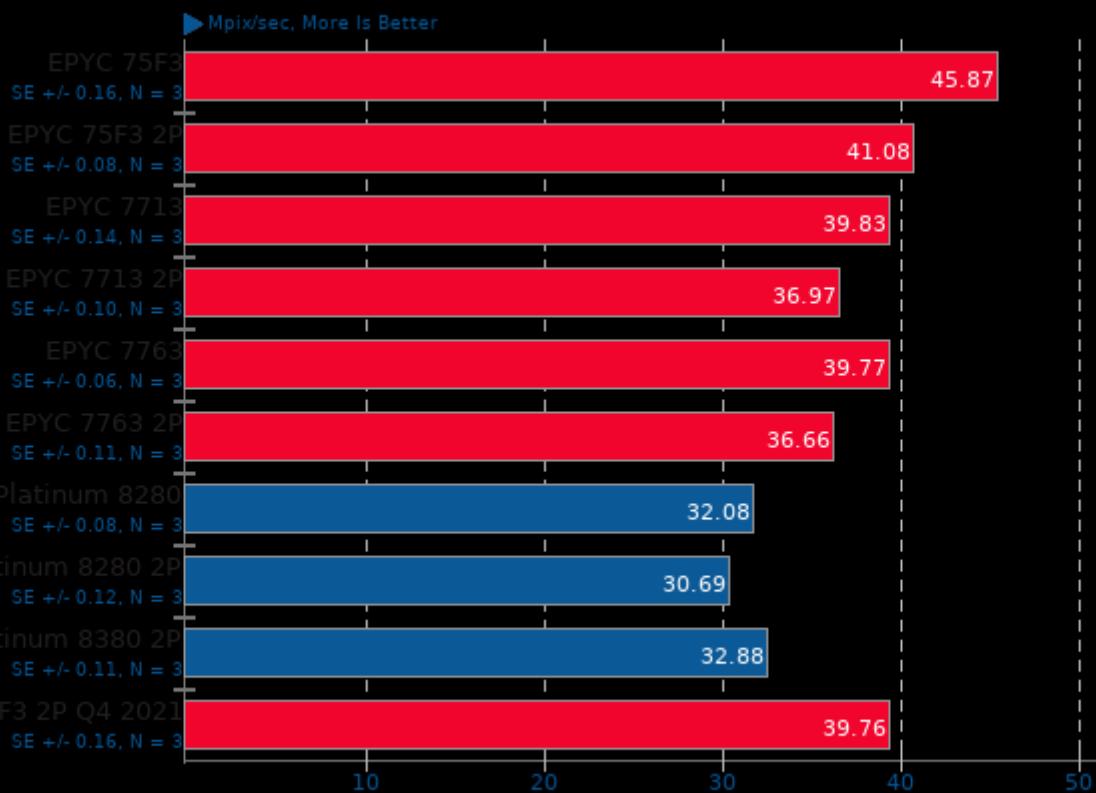
Processing 60 Page PDF Document



Initial Intel Xeon Platinum 8380 2P Benchmarks

LibRaw 0.20

Post-Processing Benchmark



1. (CXX) g++ options: -O2 -fopenmp -ljpeg -lz -lm

Initial Intel Xeon Platinum 8380 2P Benchmarks

Google SynthMark 20201109

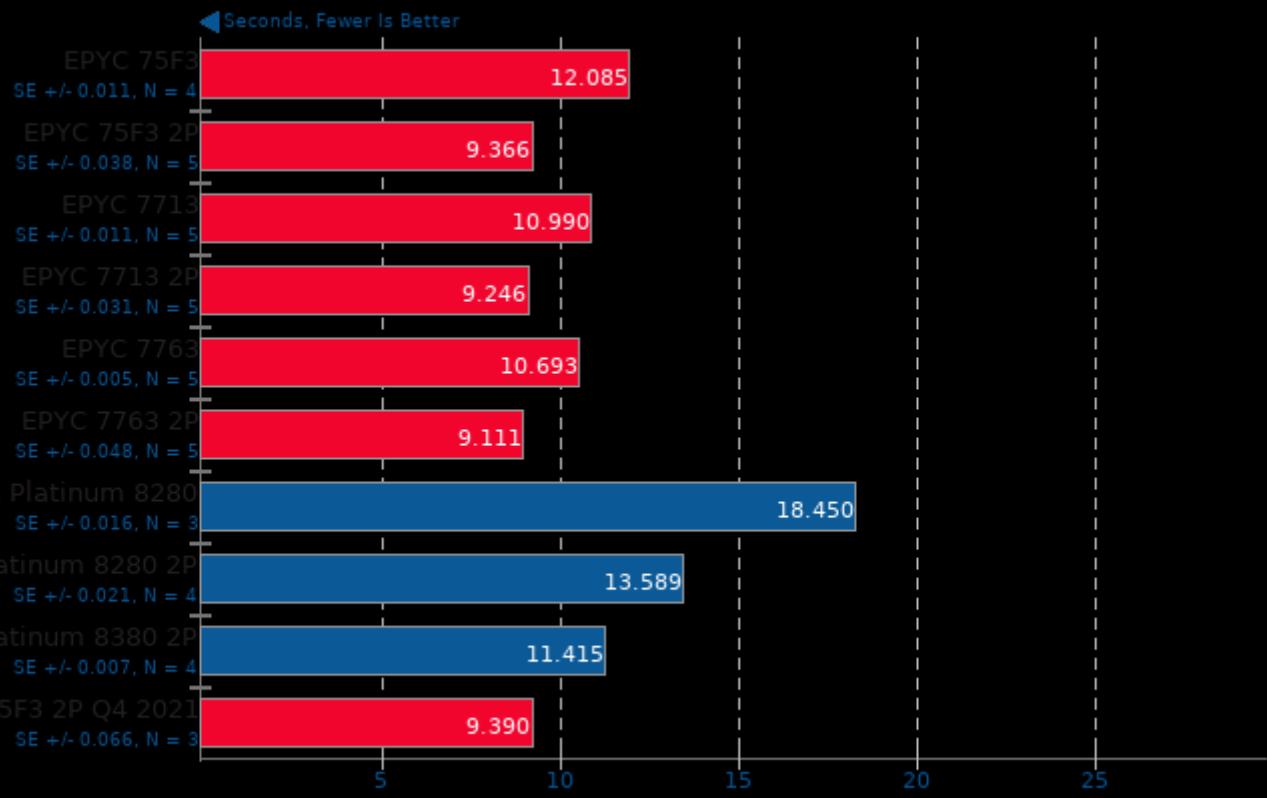
Test: VoiceMark_100



1. (CXX) g++ options: -lm -lpthread -std=c++11 -Ofast

Basis Universal 1.12

Settings: UASTC Level 2

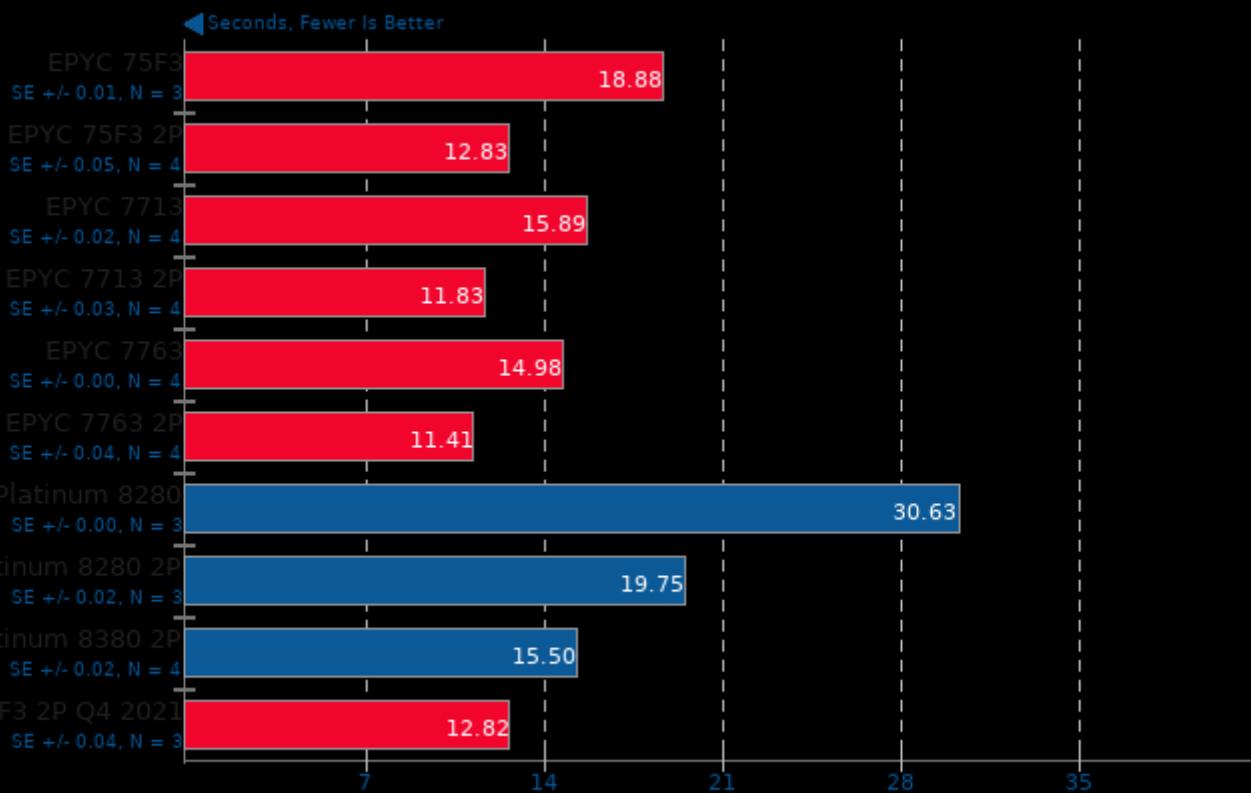


1. (CXX) g++ options: -std=c++11 -fvisibility=hidden -fPIC -fno-strict-aliasing -O3 -rdynamic -lm -lpthread

Initial Intel Xeon Platinum 8380 2P Benchmarks

Basis Universal 1.12

Settings: UASTC Level 3



1. (CXX) g++ options: -std=c++11 -fvisibility=hidden -fPIC -fno-strict-aliasing -O3 -rdynamic -lm -lpthread

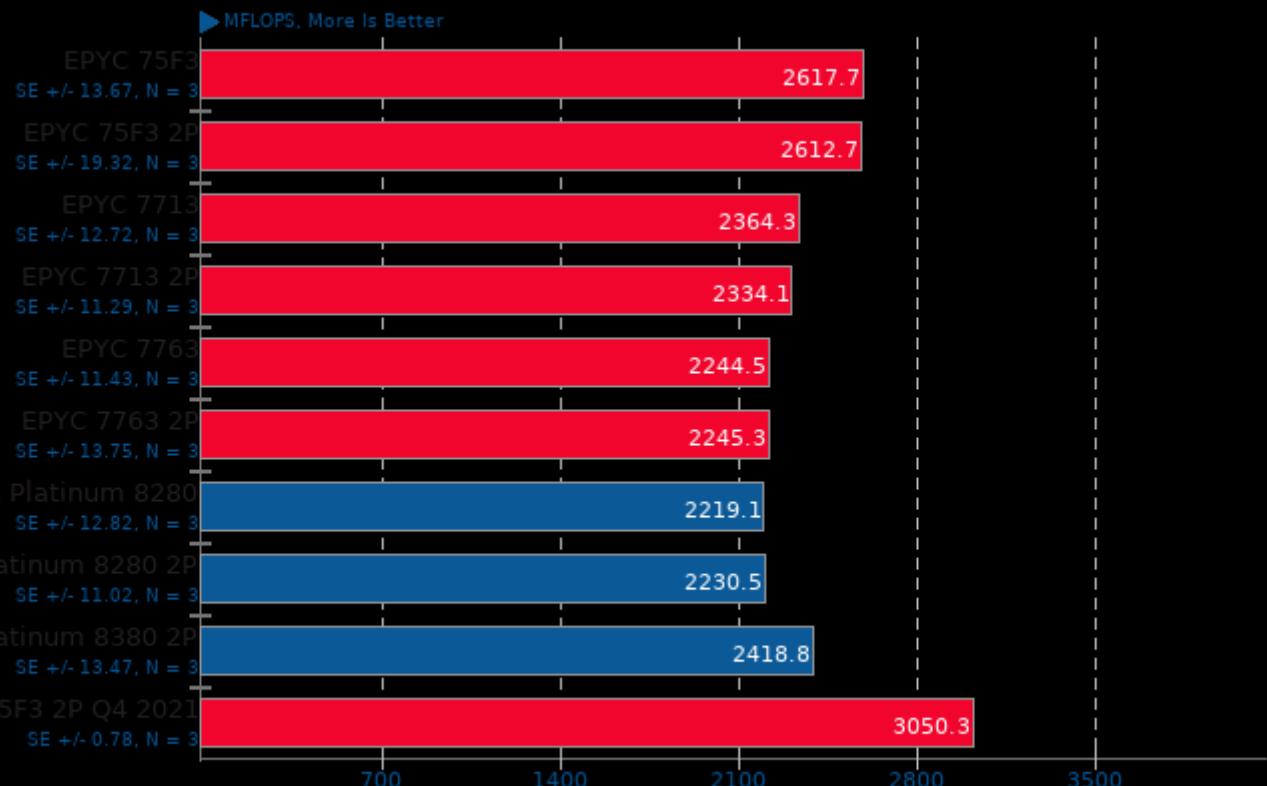
ASTC Encoder 2.0

Preset: Exhaustive



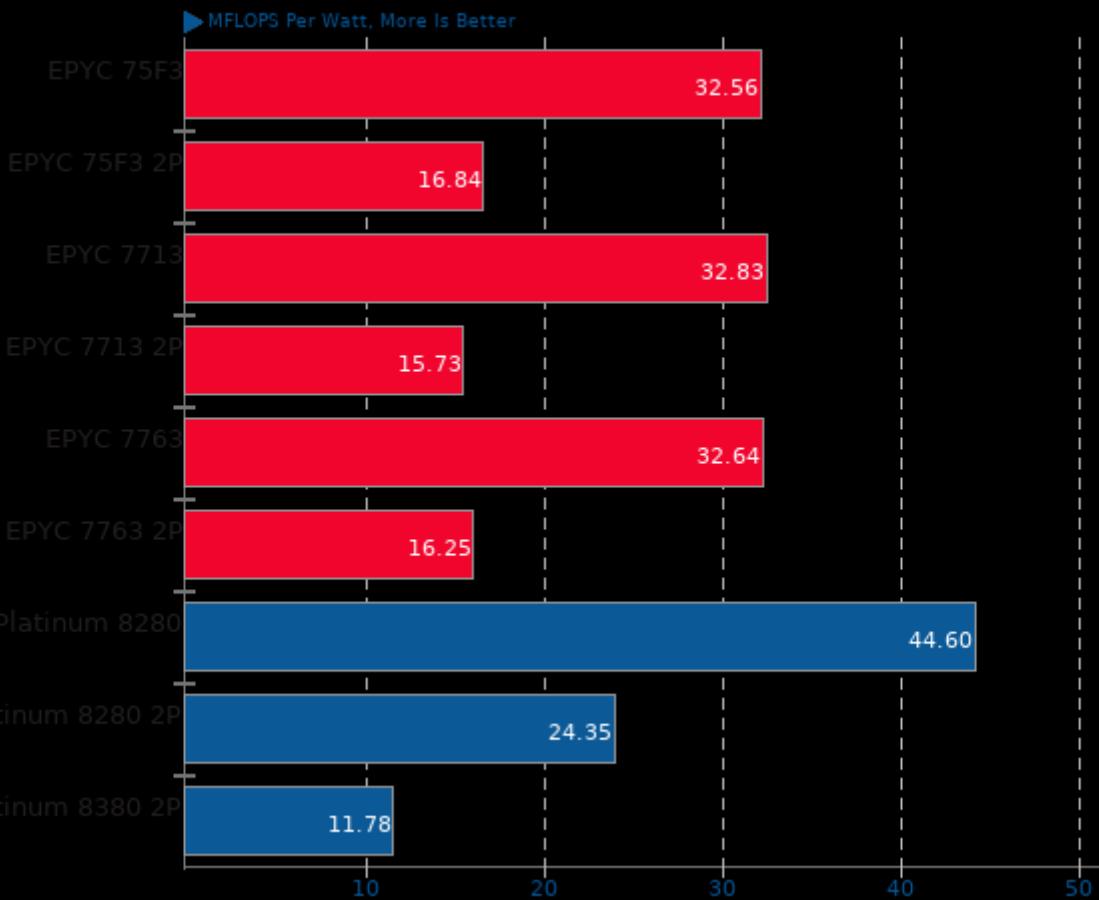
1. (CXX) g++ options: -std=c++14 -fvisibility=hidden -O3 -fno-math-errno -mfpmath=sse -mavx2 -mpopcnt -lpthread

QuantLib 1.21



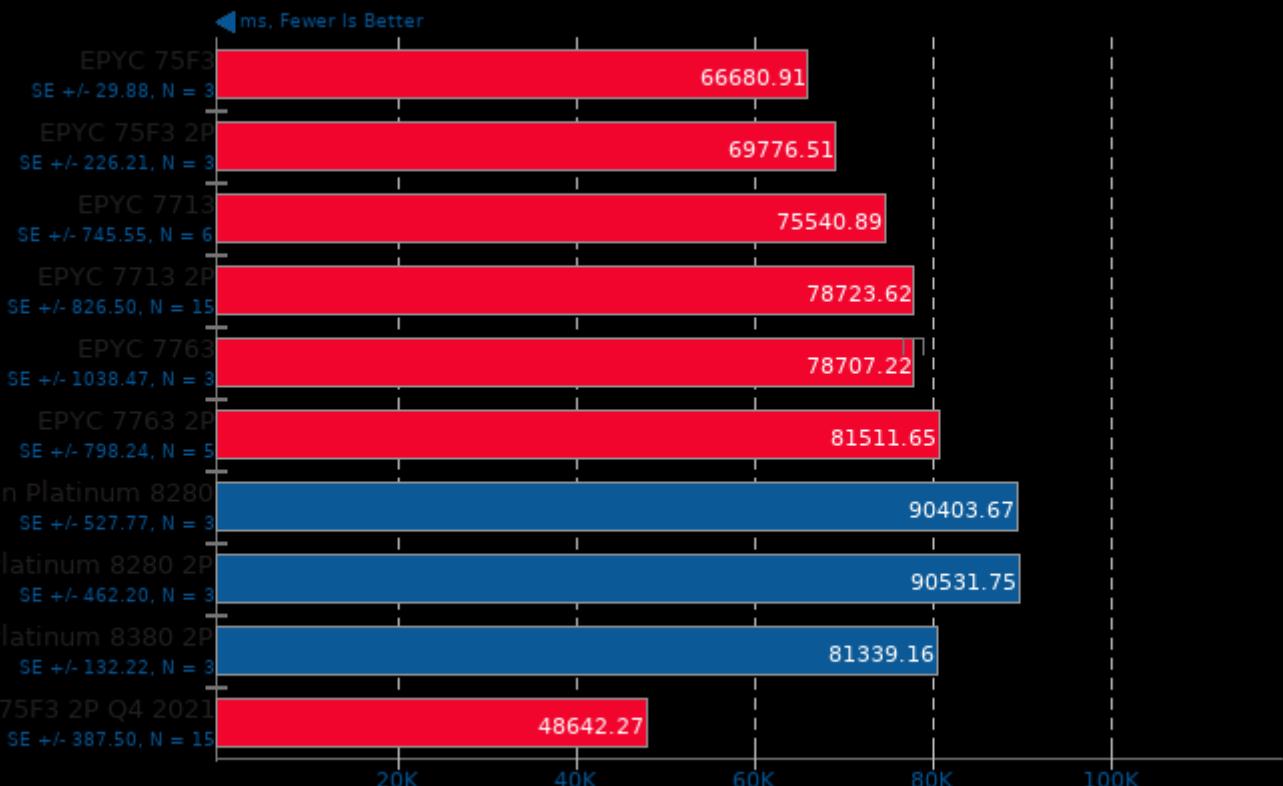
1. (CXX) g++ options: -O3 -march=native -rdynamic

QuantLib 1.21



FinanceBench 2016-07-25

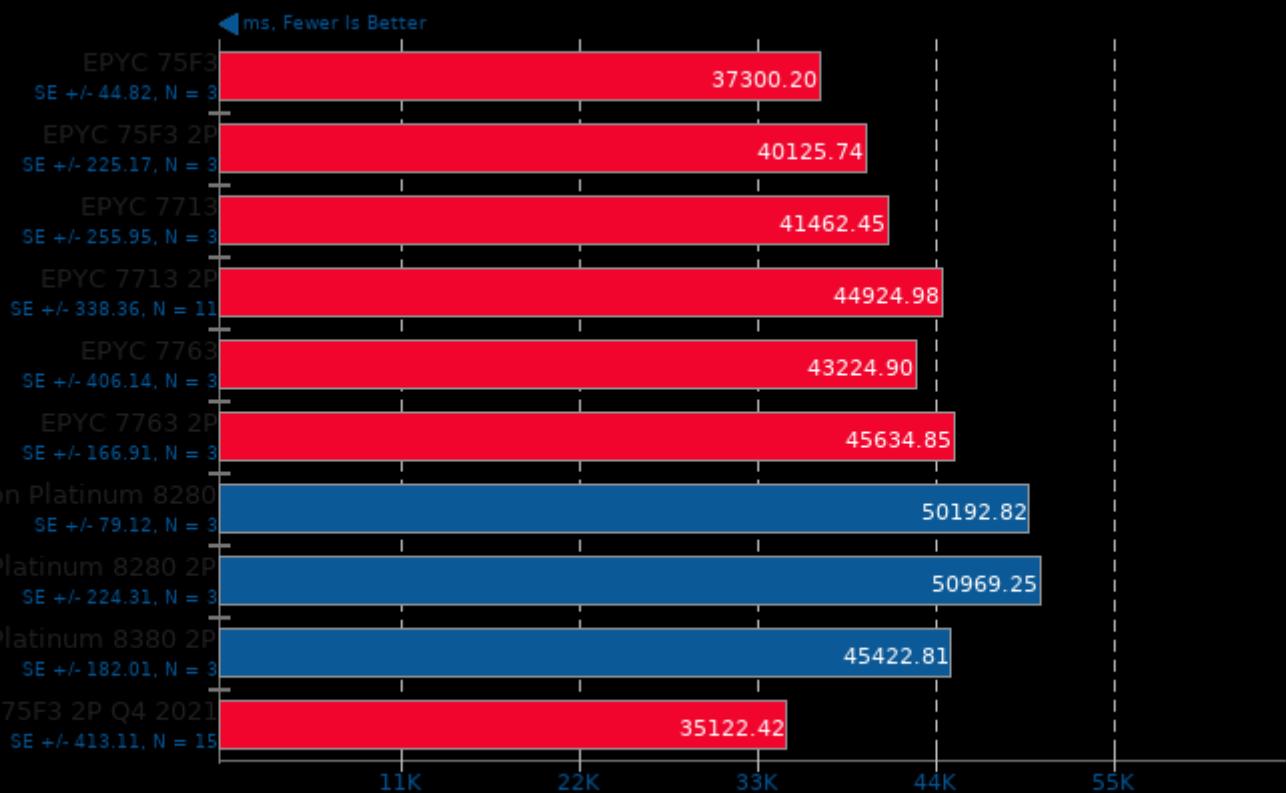
Benchmark: Bonds OpenMP



1. (CXX) g++ options: -O3 -march=native -fopenmp

FinanceBench 2016-07-25

Benchmark: Repo OpenMP

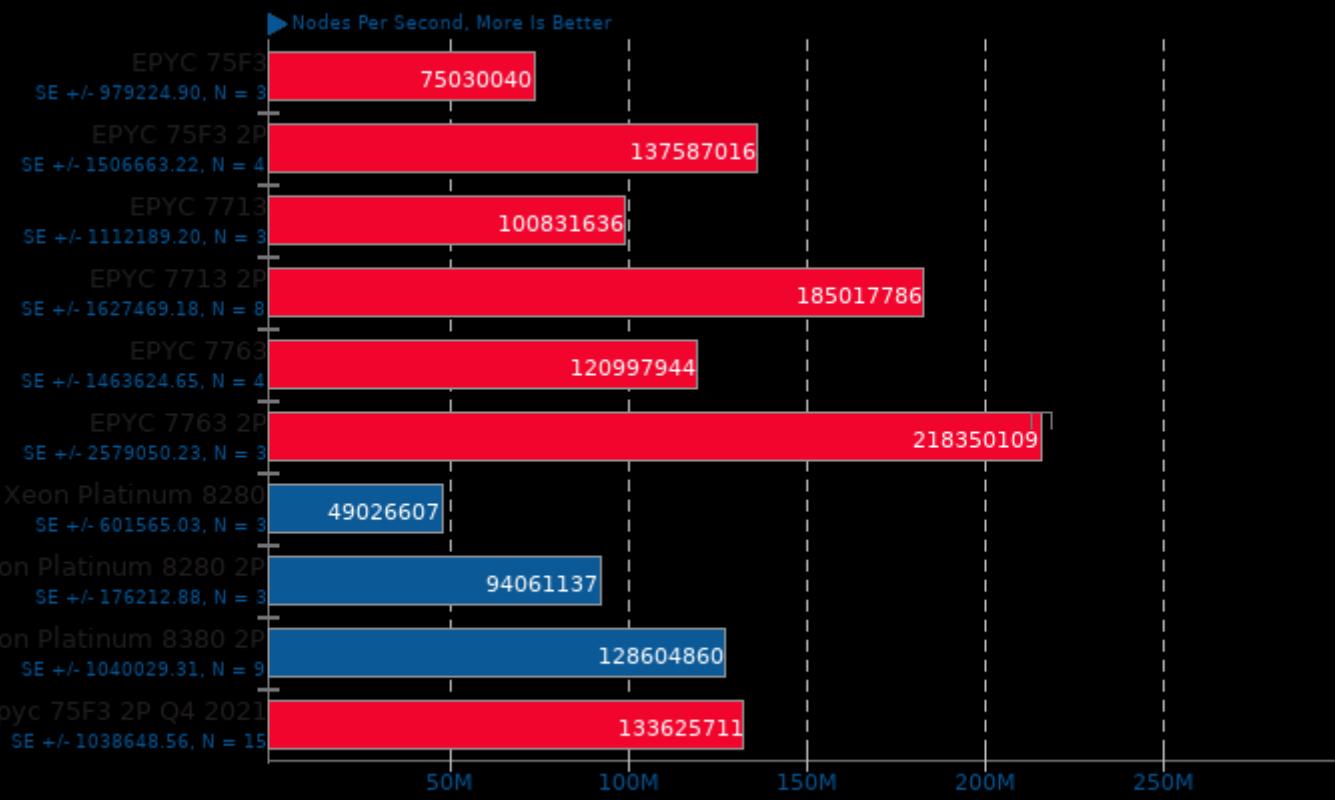


1. (CXX) g++ options: -O3 -march=native -fopenmp

Initial Intel Xeon Platinum 8380 2P Benchmarks

Stockfish 12

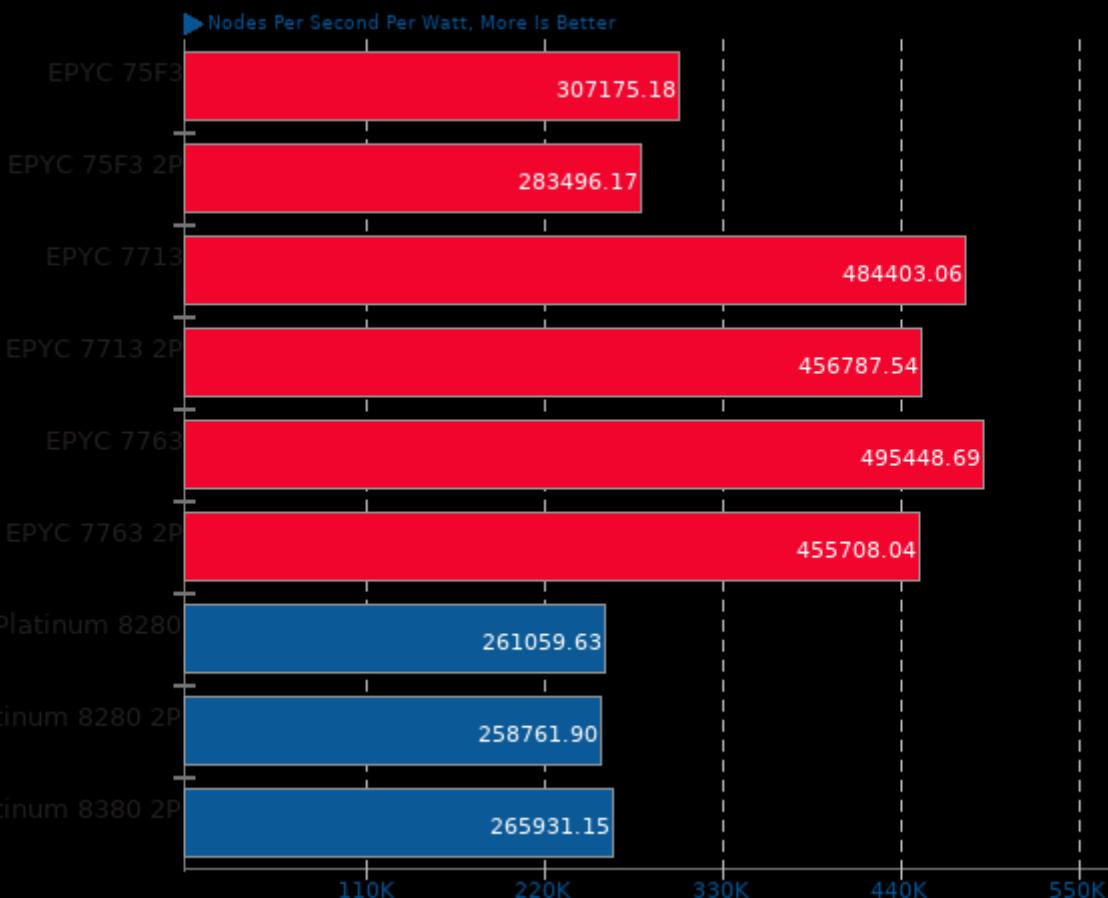
Total Time



1. (CXX) g++ options: -m64 -lpthread -fno-exceptions -std=c++17 -pedantic -O3 -msse -msse3 -mpopcnt -msse4.1 -mssse3 -msse2 -fno-observer

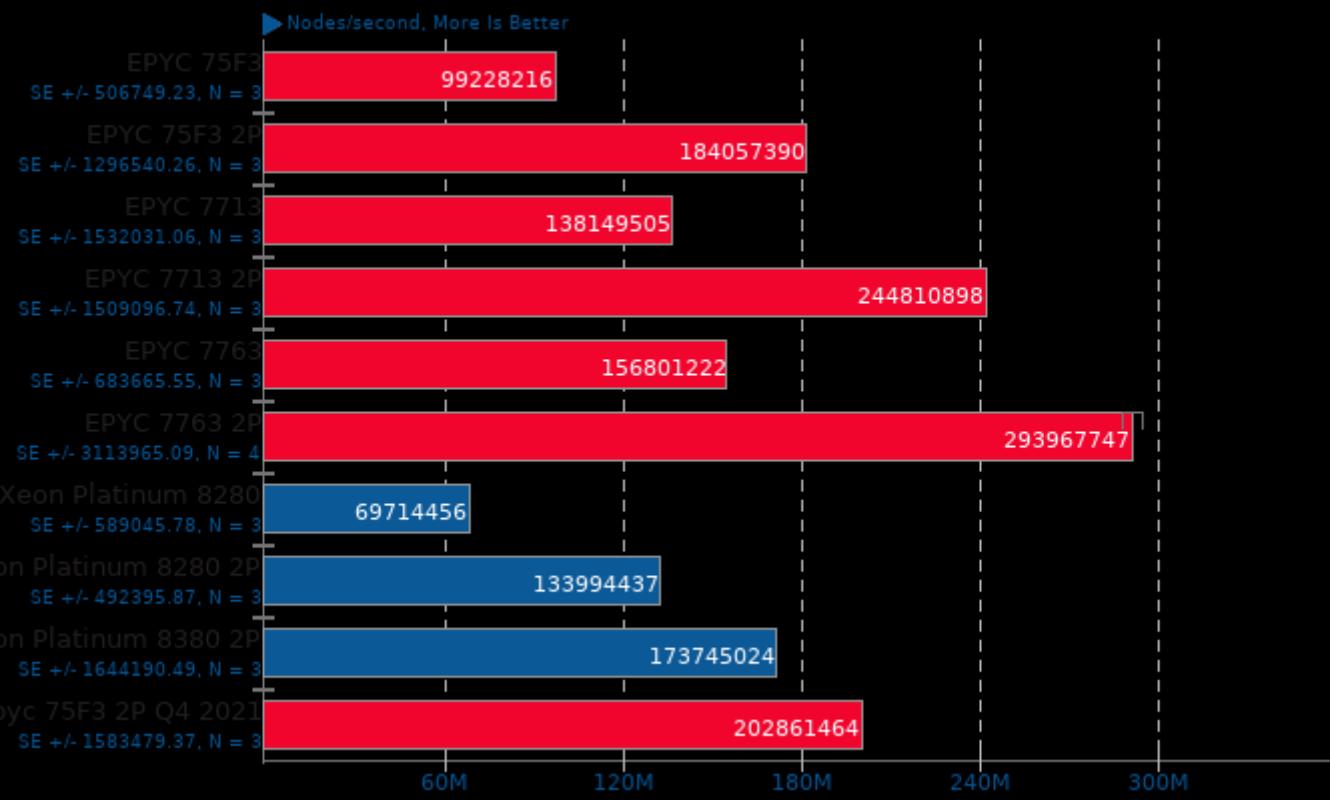
Stockfish 12

Total Time



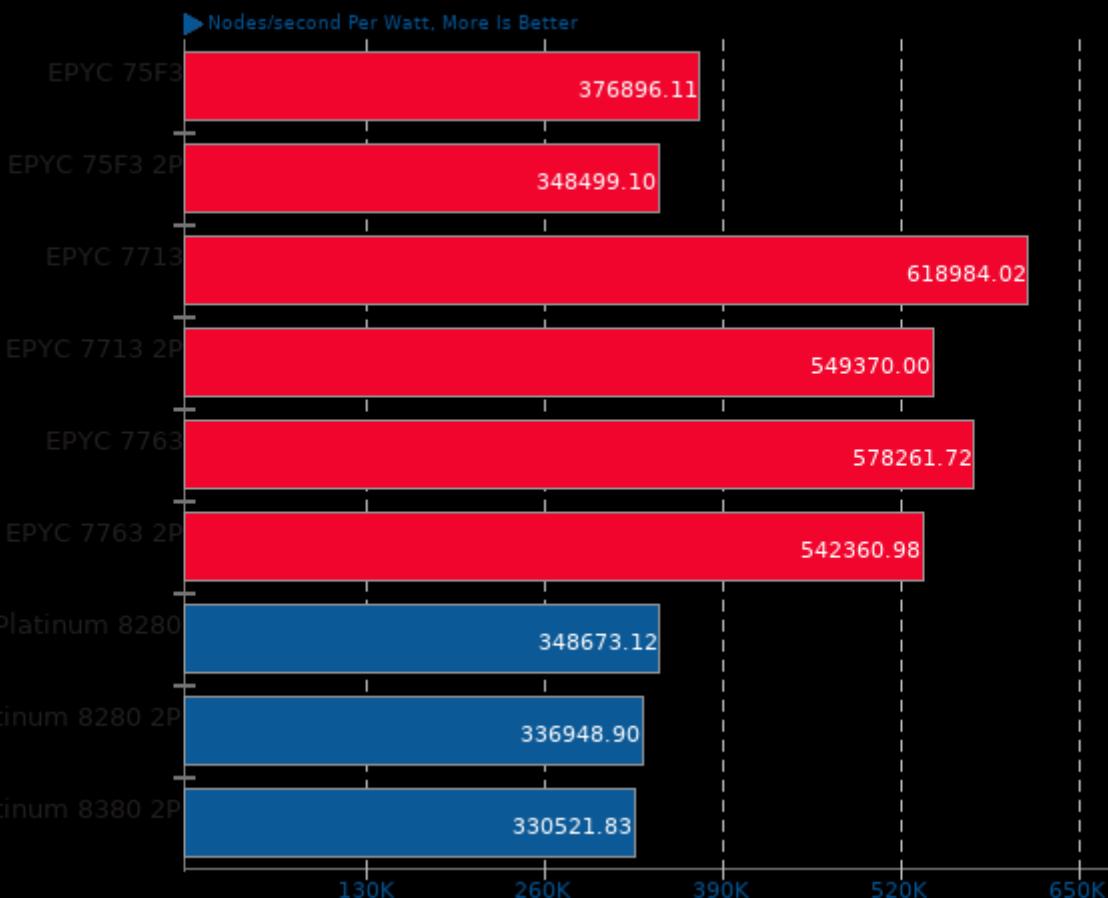
asmFish 2018-07-23

1024 Hash Memory, 26 Depth



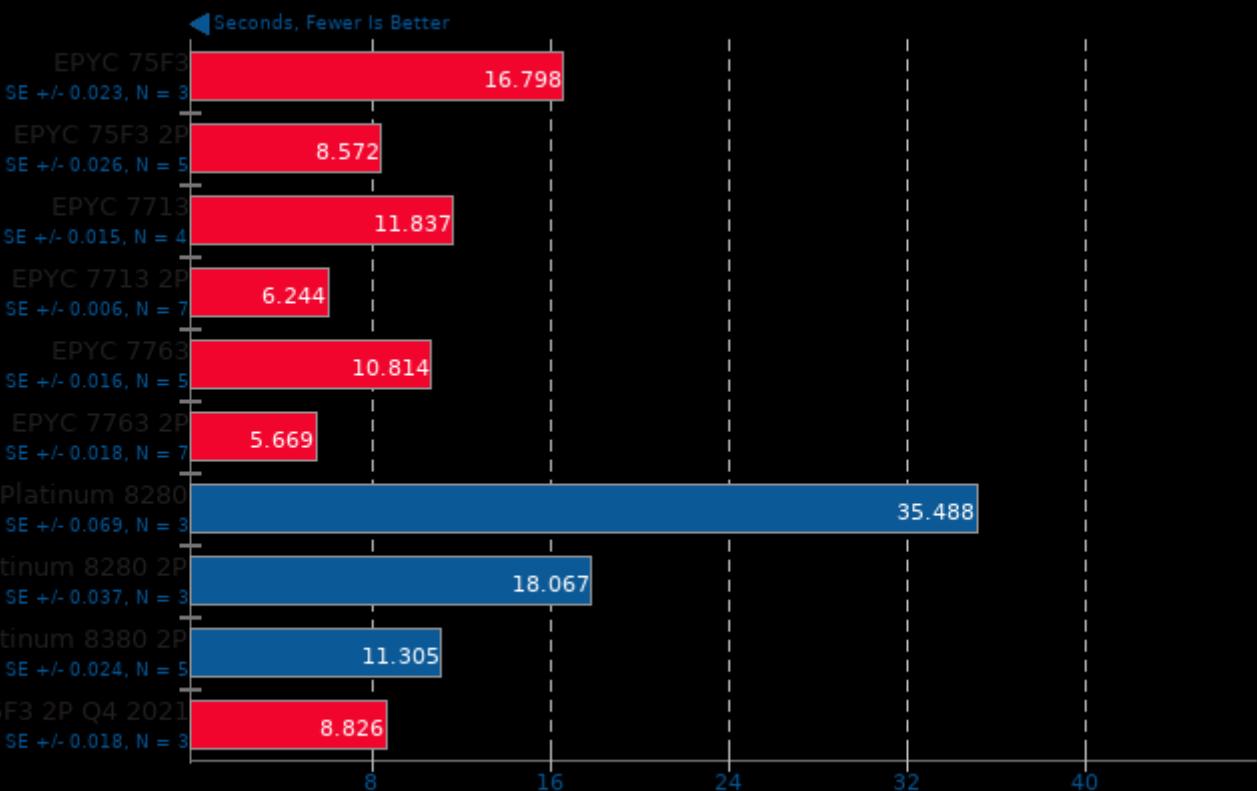
asmFish 2018-07-23

1024 Hash Memory, 26 Depth



m-queens 1.2

Time To Solve



1. (CXX) g++ options: -fopenmp -O2 -march=native

Initial Intel Xeon Platinum 8380 2P Benchmarks

Hierarchical INTegration 1.0

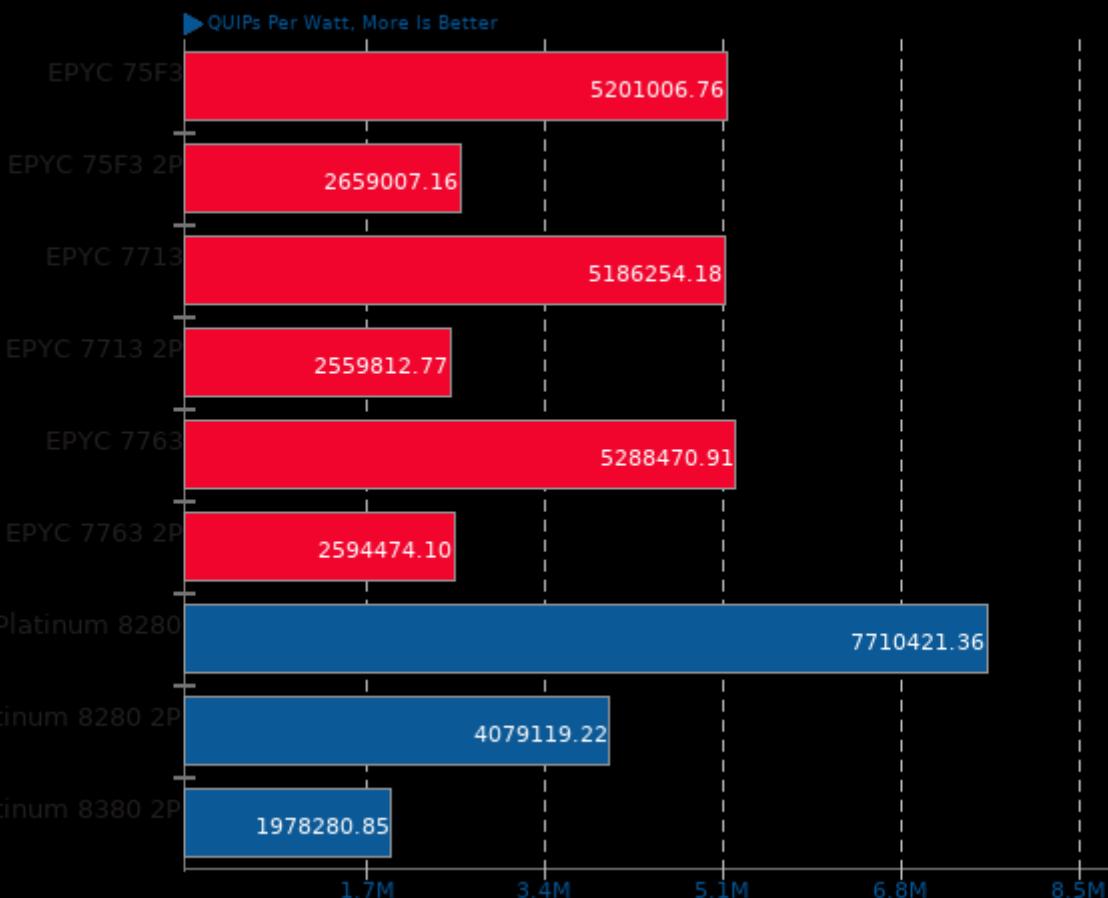
Test: FLOAT



1. (CC) gcc options: -O3 -march=native -lm

Hierarchical INTegration 1.0

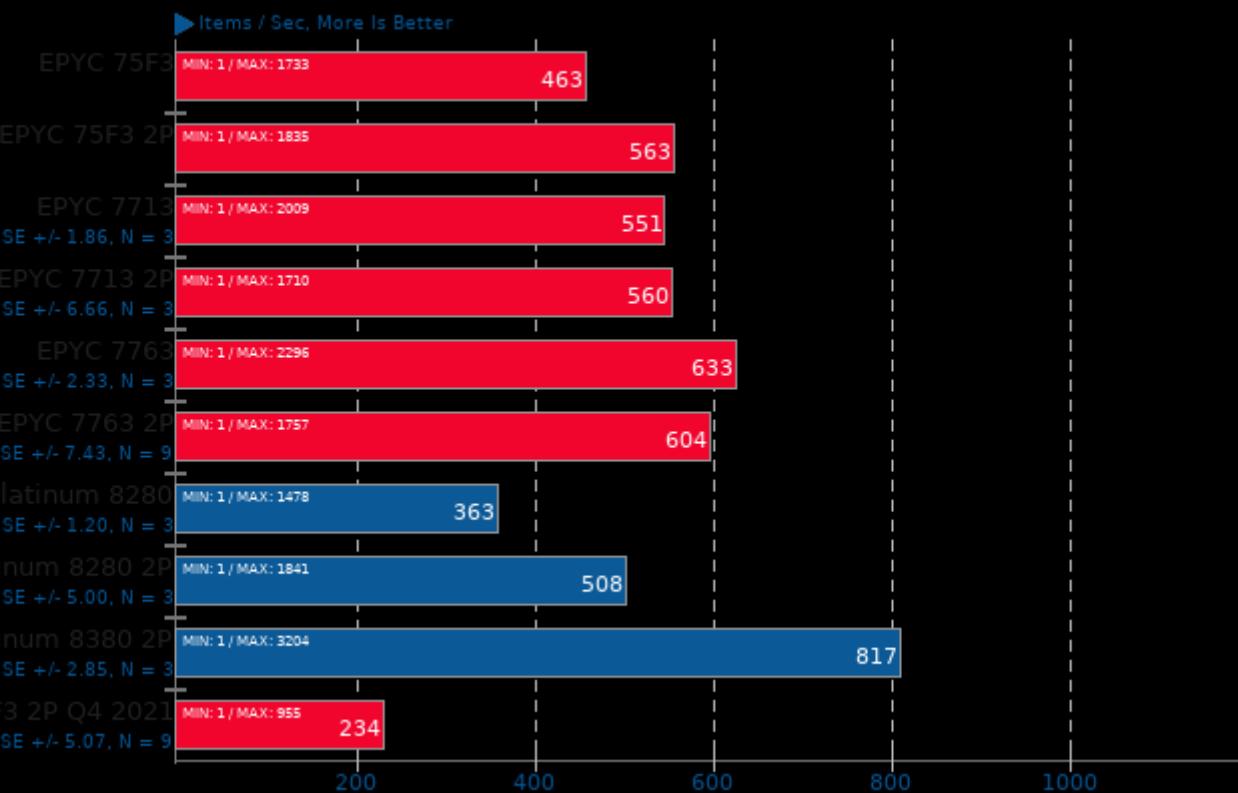
Test: FLOAT



Initial Intel Xeon Platinum 8380 2P Benchmarks

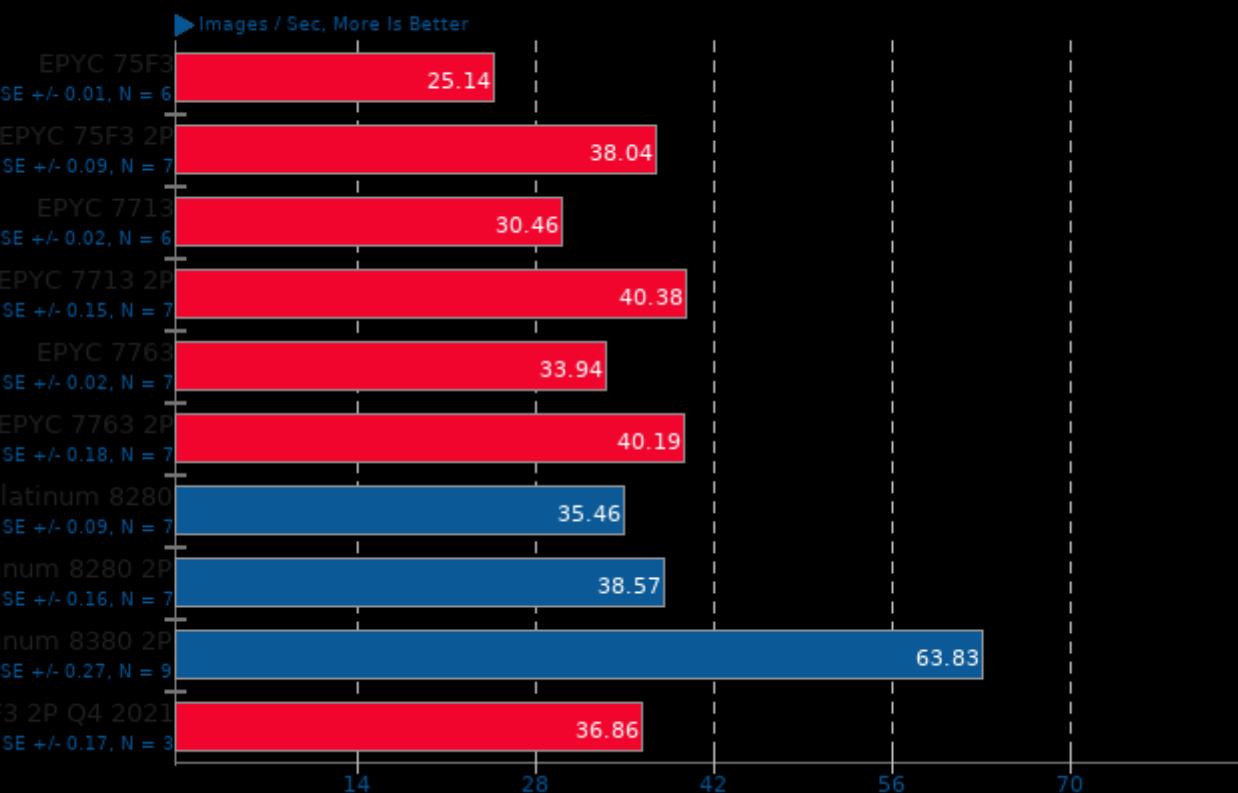
OpenVKL 0.9

Benchmark: vklBenchmark



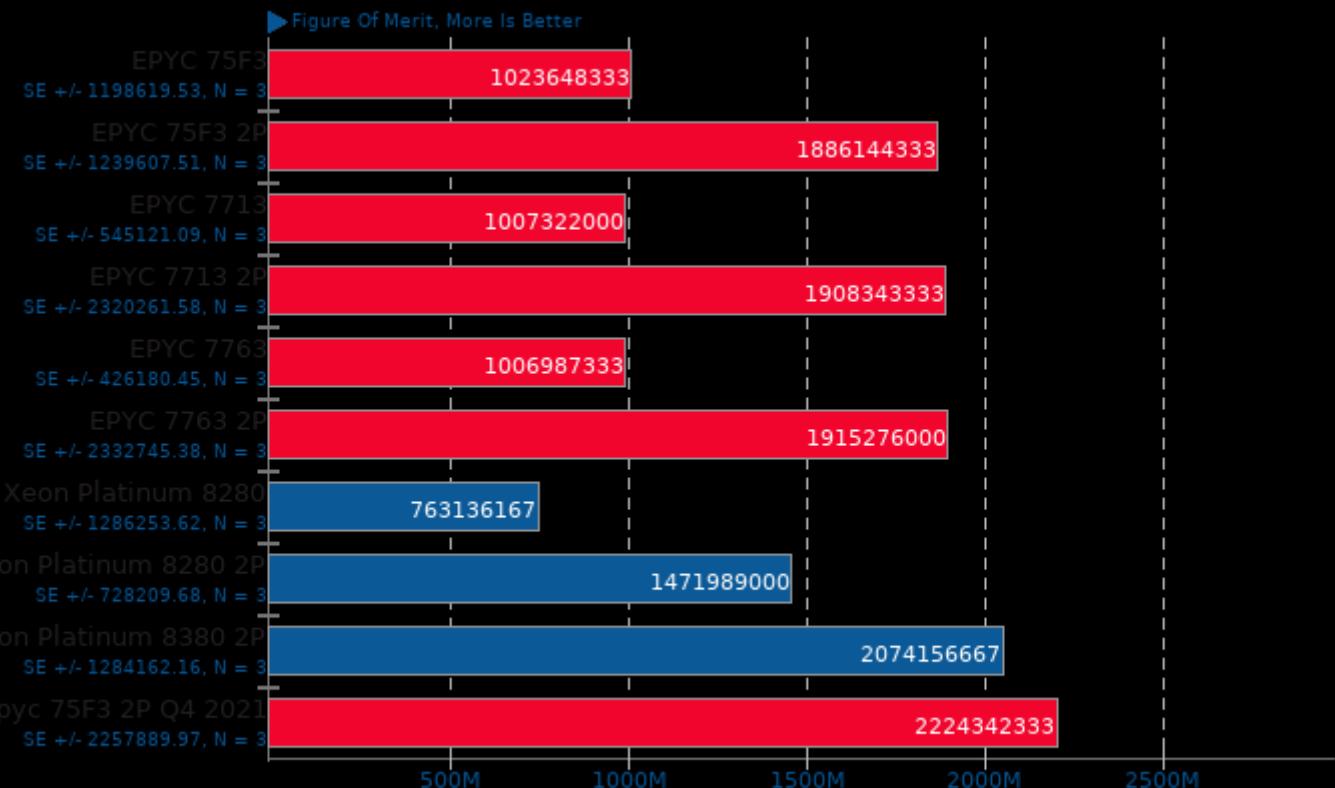
Intel Open Image Denoise 1.2.0

Scene: Memorial



Initial Intel Xeon Platinum 8380 2P Benchmarks

Algebraic Multi-Grid Benchmark 1.2

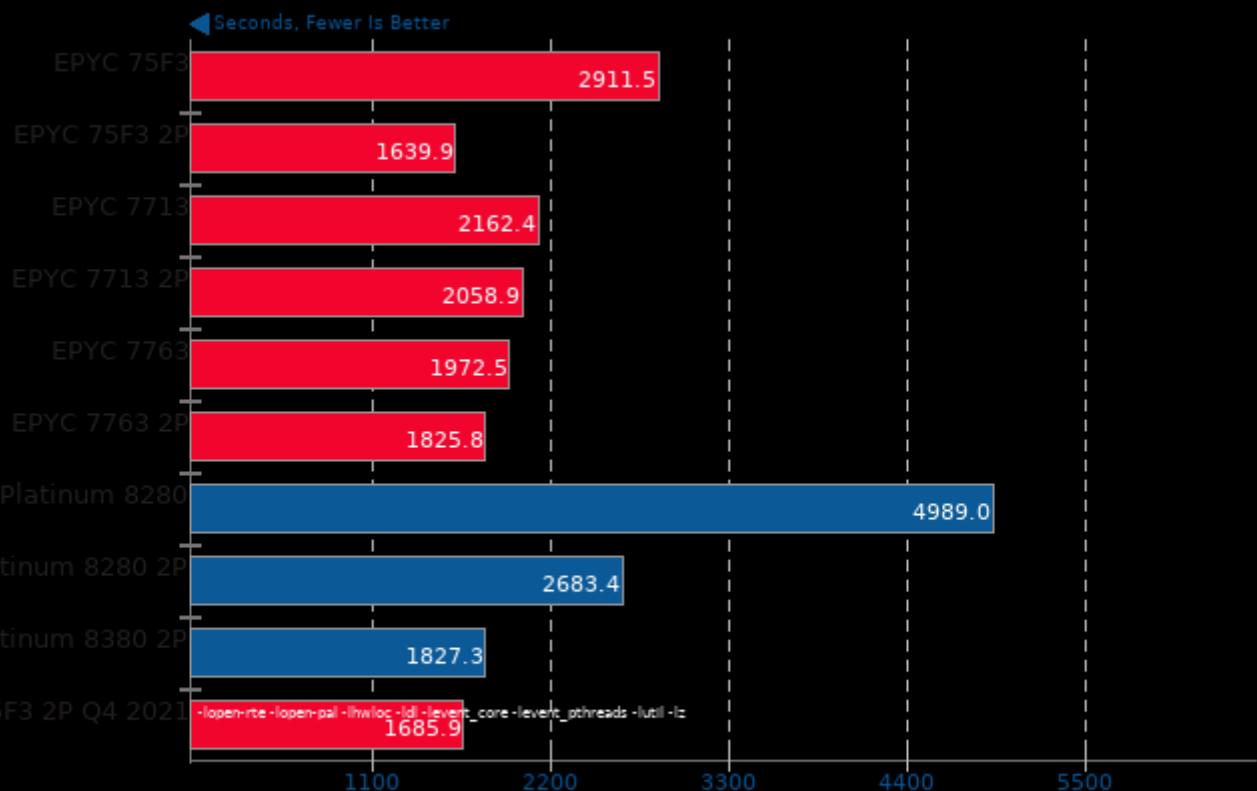


1. (CC) gcc options: -lparcsr_ls -lparcsr_mv -lseq_mv -lIJ_mv -lkrylov -lHYPRE_utilities -lm -fopenmp -pthread -lmpi

Initial Intel Xeon Platinum 8380 2P Benchmarks

NWChem 7.0.2

Input: C240 Buckyball



1. (F9X) gfortran options: -Inwctask -Iccsd -Imcscf -Isclci -Imp2 -Imoints -Istepper -Idriver -Optim -Inwdft -Igradients -Icpfhf -Iesp -Iddscf -Idangchang -Igue

Initial Intel Xeon Platinum 8380 2P Benchmarks

Ngspice 34

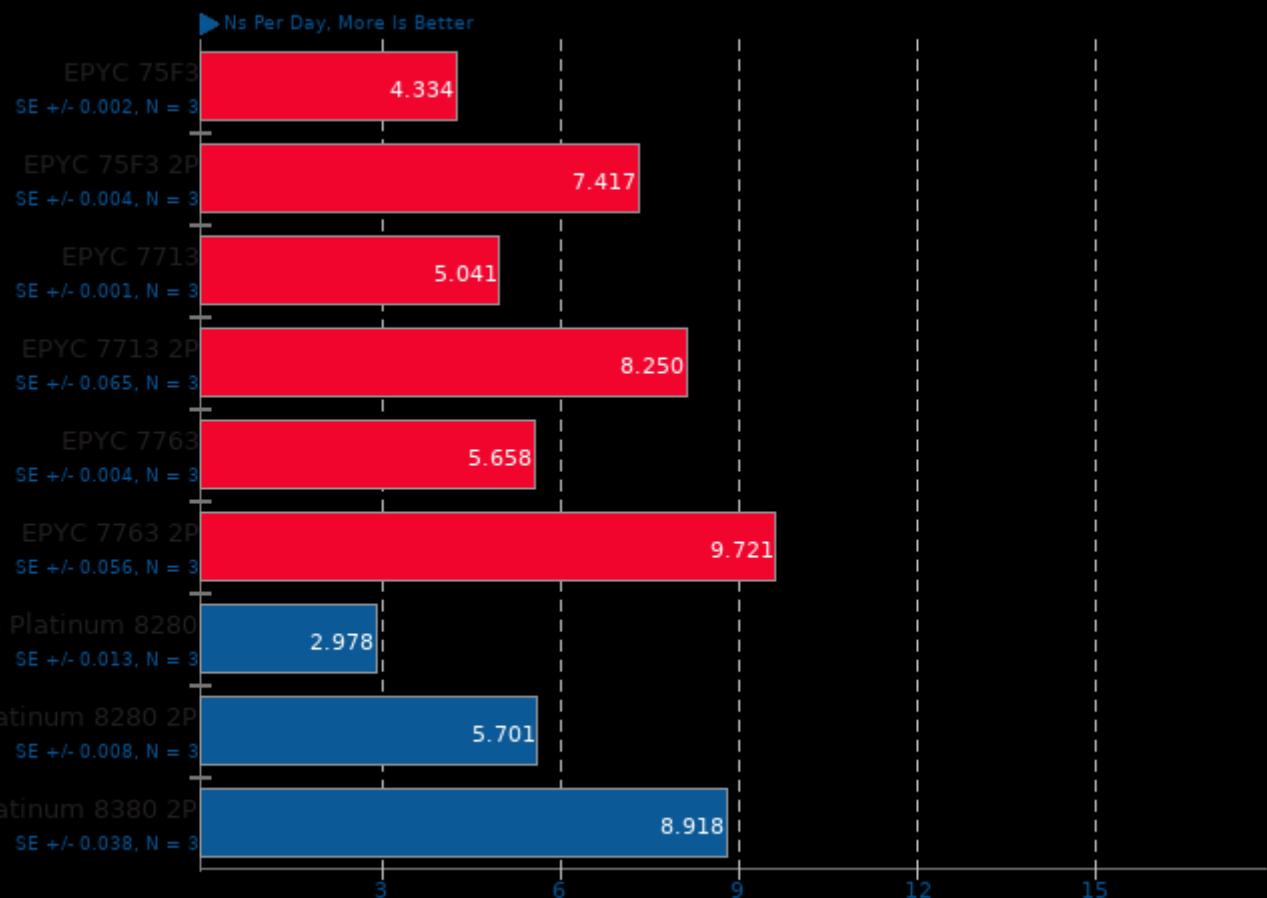
Circuit: C2670



1. (CC) gcc options: -O0 -fopenmp -lm -std=c++ -lfftw3 -lXaw -lXmu -lXt -lXext -lX11 -lSM -lICE

GROMACS 2021

Input: water_GMX50_bare

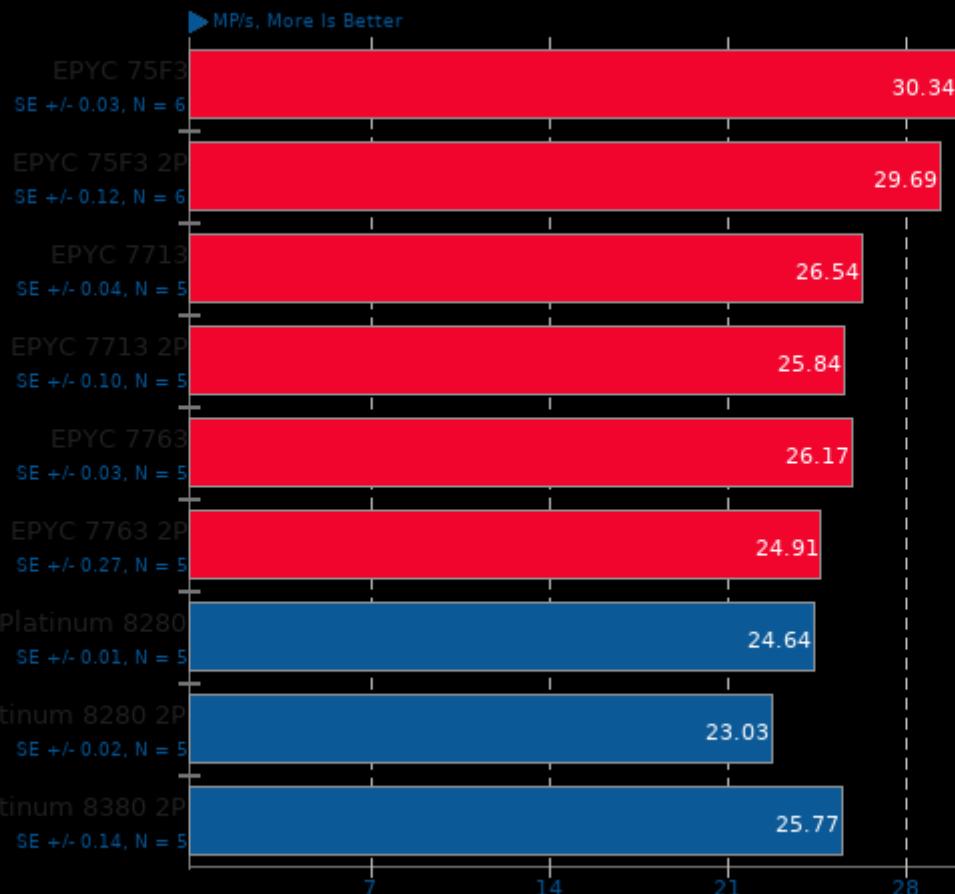


1. (CXX) g++ options: -O3 -pthread

Initial Intel Xeon Platinum 8380 2P Benchmarks

JPEG XL 0.3.1

Input: JPEG - Encode Speed: 8



1. (CXX) g++ options: -funwind-tables -O3 -O2 -fPIE -pie -pthread -ldl

Initial Intel Xeon Platinum 8380 2P Benchmarks

toyBrot Fractal Generator 2020-11-18

Implementation: TBB

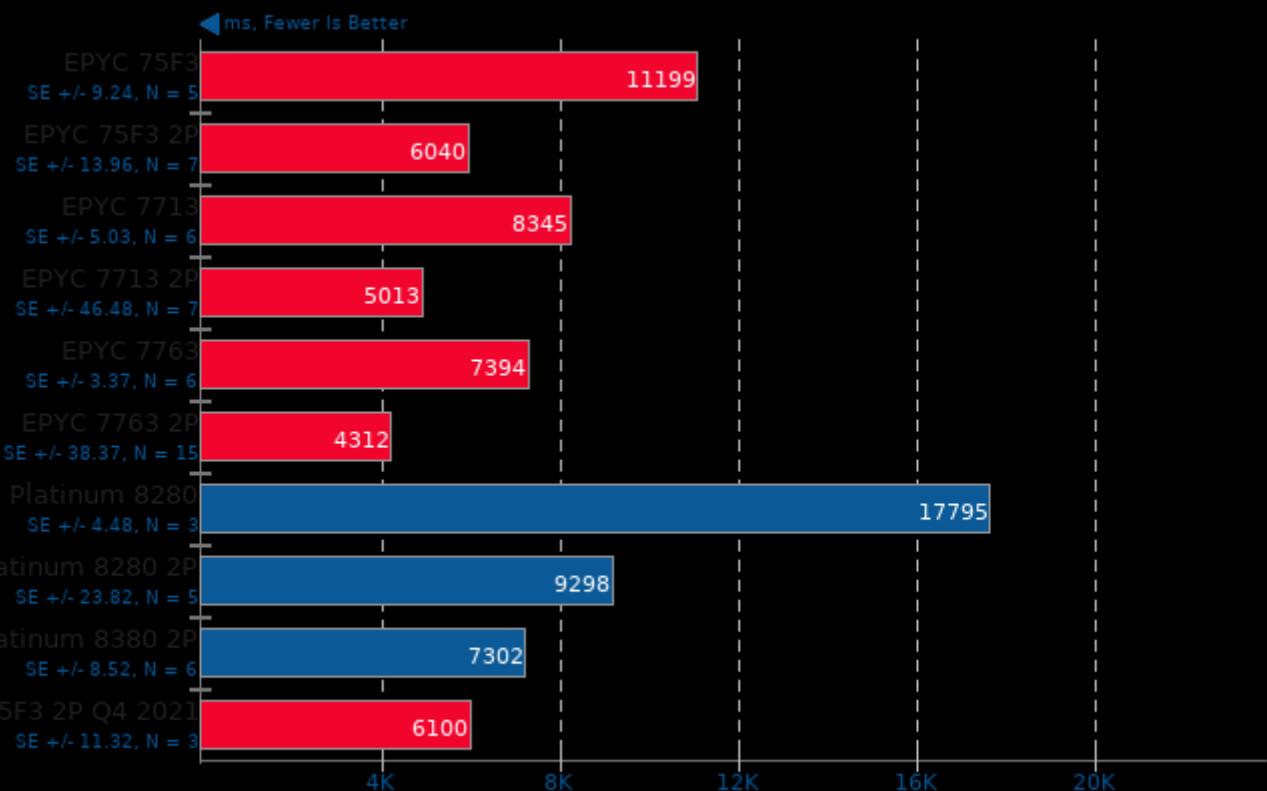


1. (CXX) g++ options: -O3 -lpthread -lm -lgcc -lgcc_s -lc

Initial Intel Xeon Platinum 8380 2P Benchmarks

toyBrot Fractal Generator 2020-11-18

Implementation: OpenMP

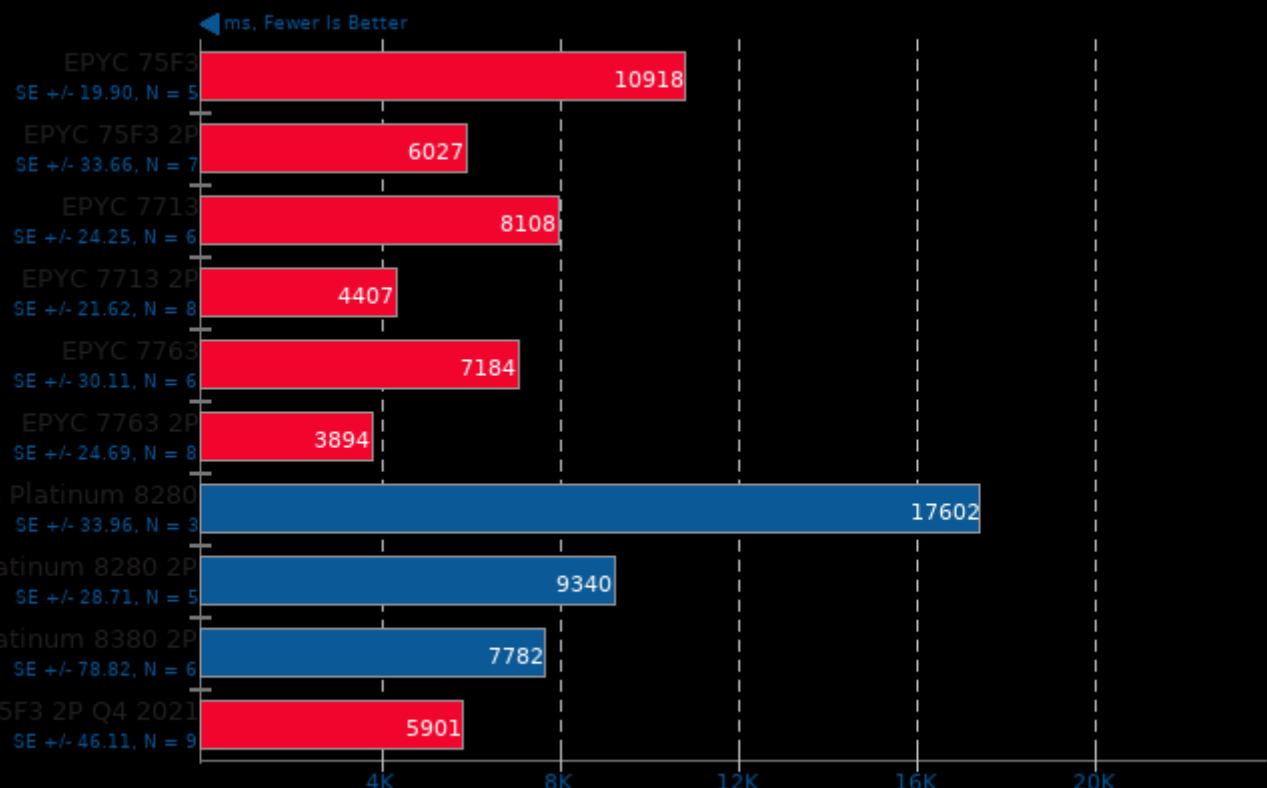


1. (CXX) g++ options: -O3 -lpthread -lm -lgcc -lgcc_s -lc

Initial Intel Xeon Platinum 8380 2P Benchmarks

toyBrot Fractal Generator 2020-11-18

Implementation: C++ Tasks

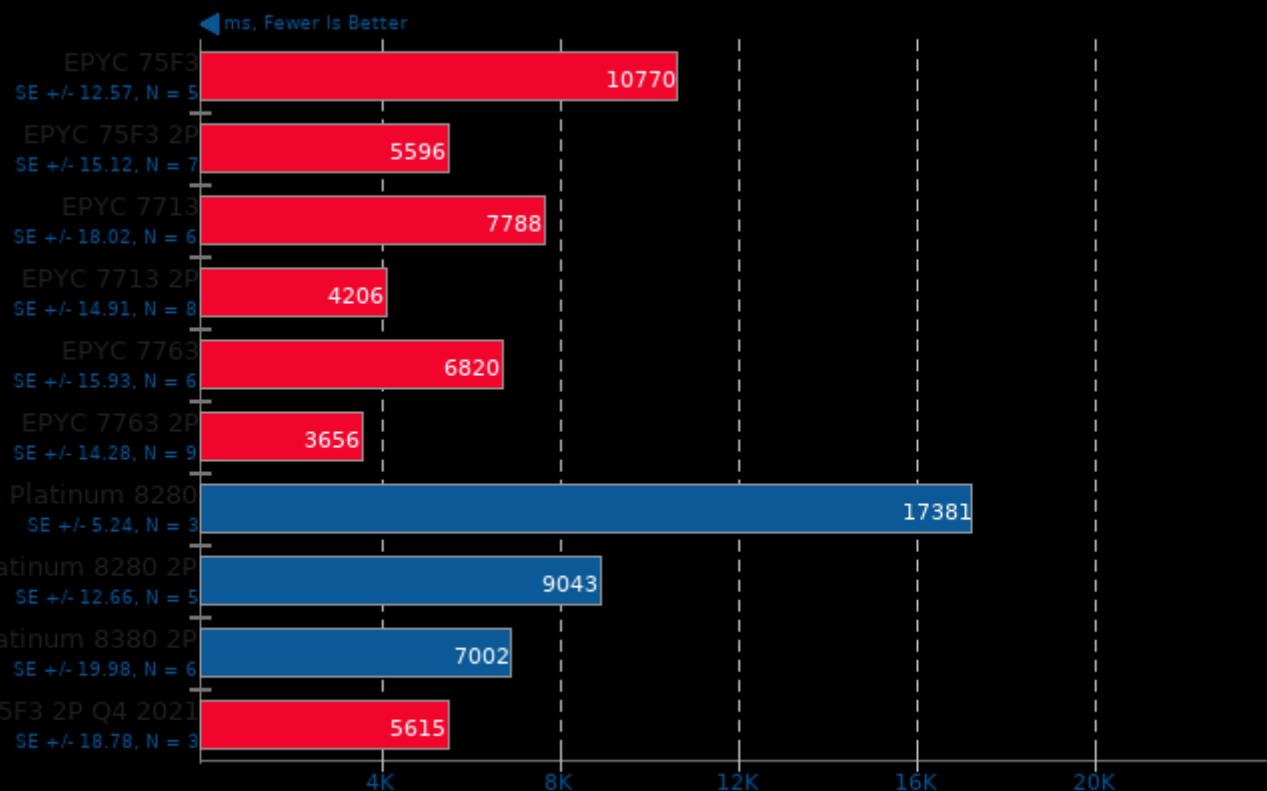


1. (CXX) g++ options: -O3 -lpthread -lm -lgcc -lgcc_s -lc

Initial Intel Xeon Platinum 8380 2P Benchmarks

toyBrot Fractal Generator 2020-11-18

Implementation: C++ Threads



1. (CXX) g++ options: -O3 -lpthread -lm -lgcc -lgcc_s -lc

Initial Intel Xeon Platinum 8380 2P Benchmarks

libavif avifenc 0.9.0

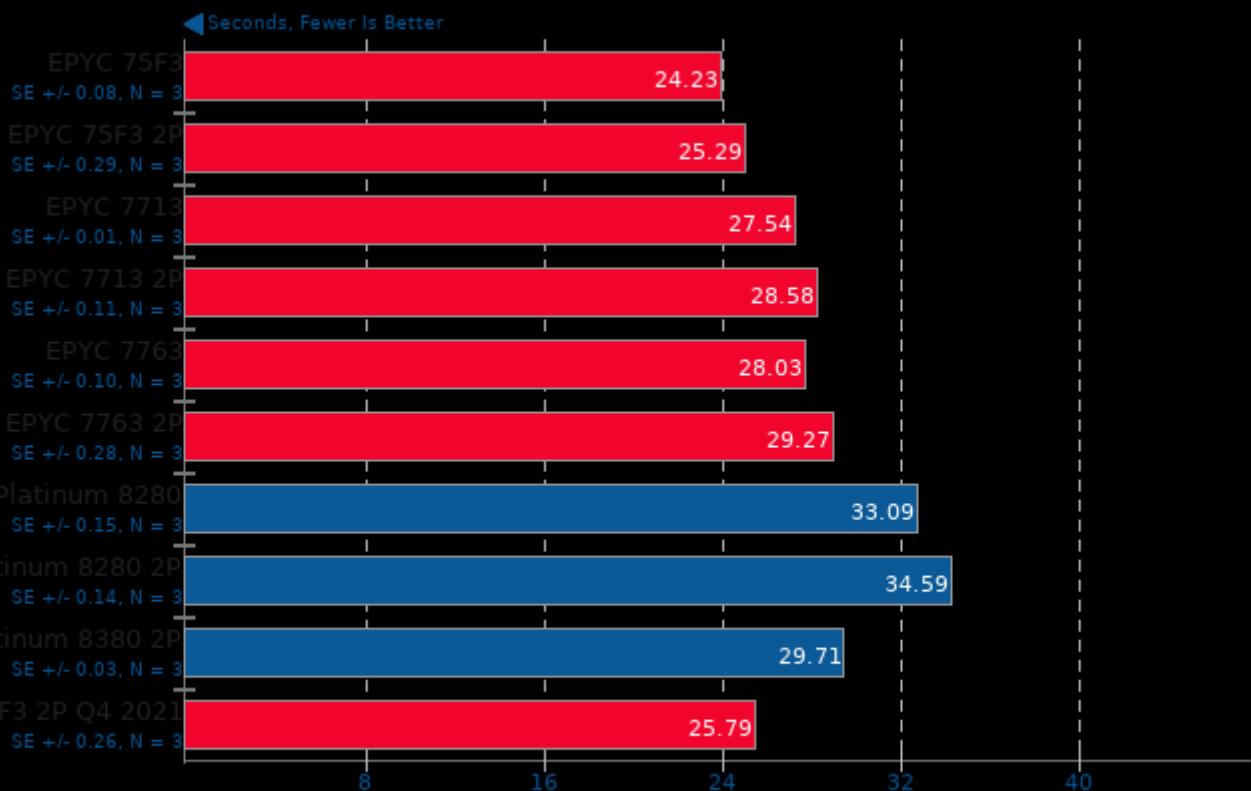
Encoder Speed: 0



1. (CXX) g++ options: -O3 -fPIC -lm

libavif avifenc 0.9.0

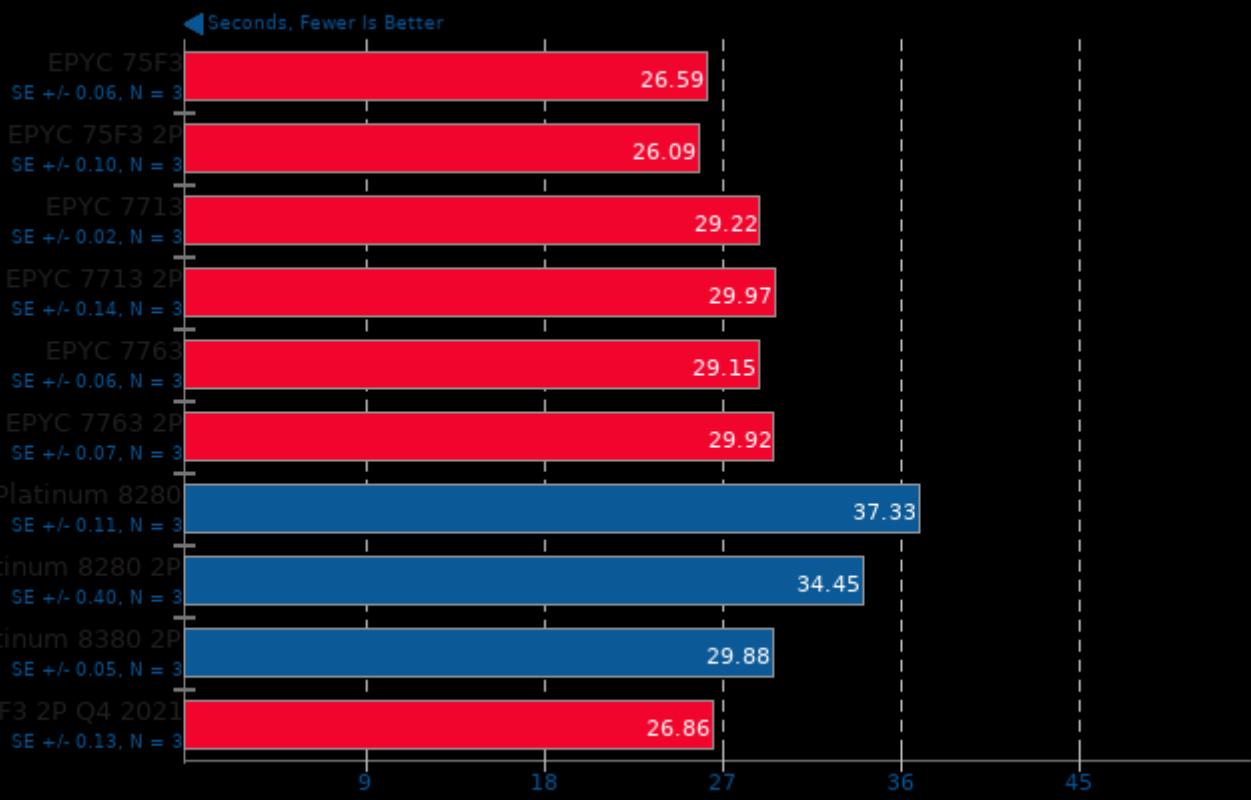
Encoder Speed: 2



1. (CXX) g++ options: -O3 -fPIC -lm

libavif avifenc 0.9.0

Encoder Speed: 6, Lossless

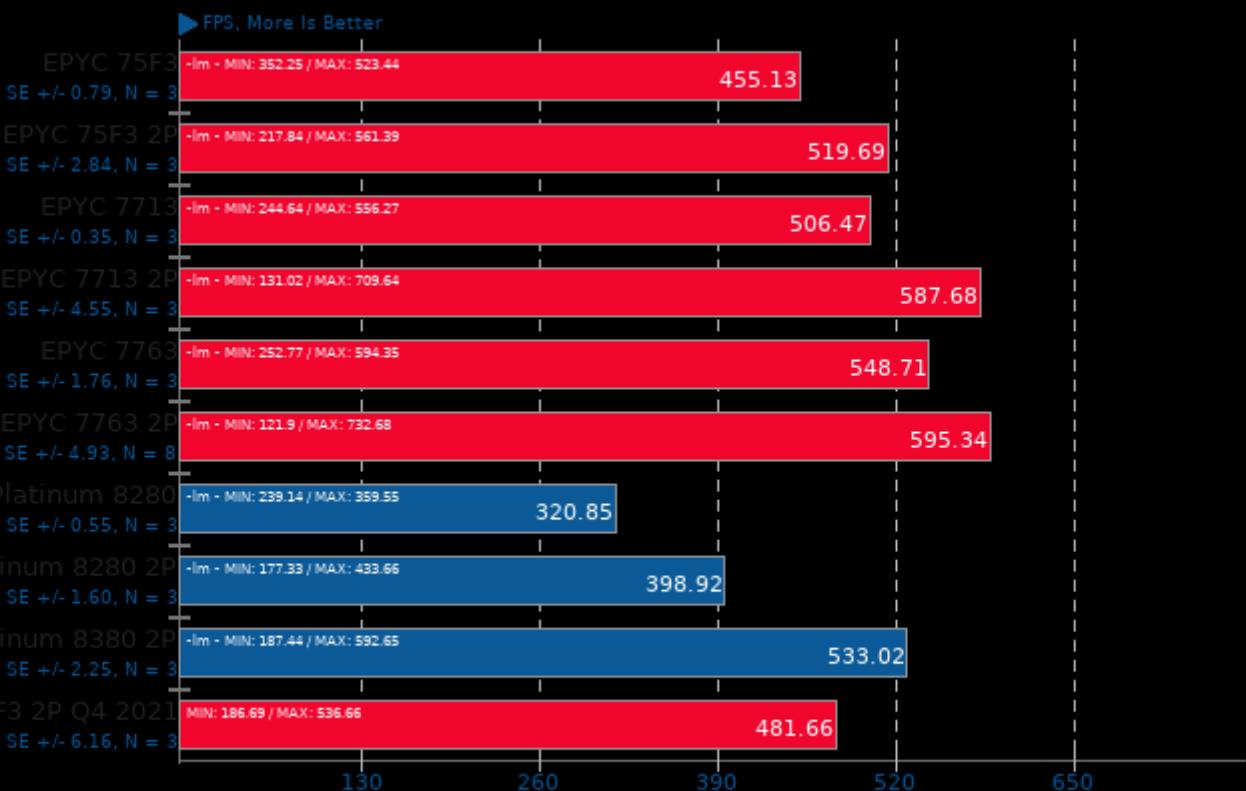


1. (CXX) g++ options: -O3 -fPIC -lm

Initial Intel Xeon Platinum 8380 2P Benchmarks

dav1d 0.8.2

Video Input: Summer Nature 4K

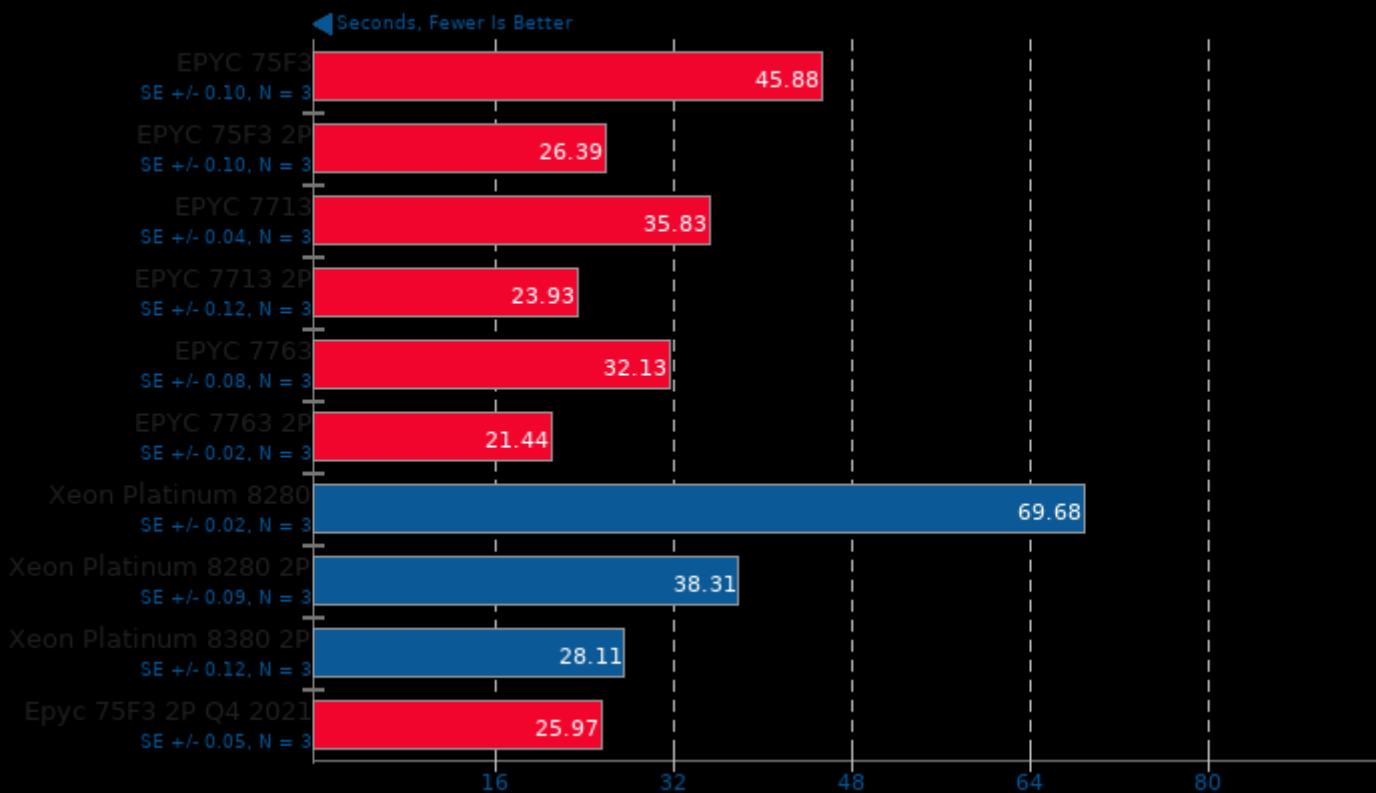


1. (CC) gcc options: -pthread

Initial Intel Xeon Platinum 8380 2P Benchmarks

Blender 2.92

Blend File: BMW27 - Compute: CPU-Only



Blender 2.92

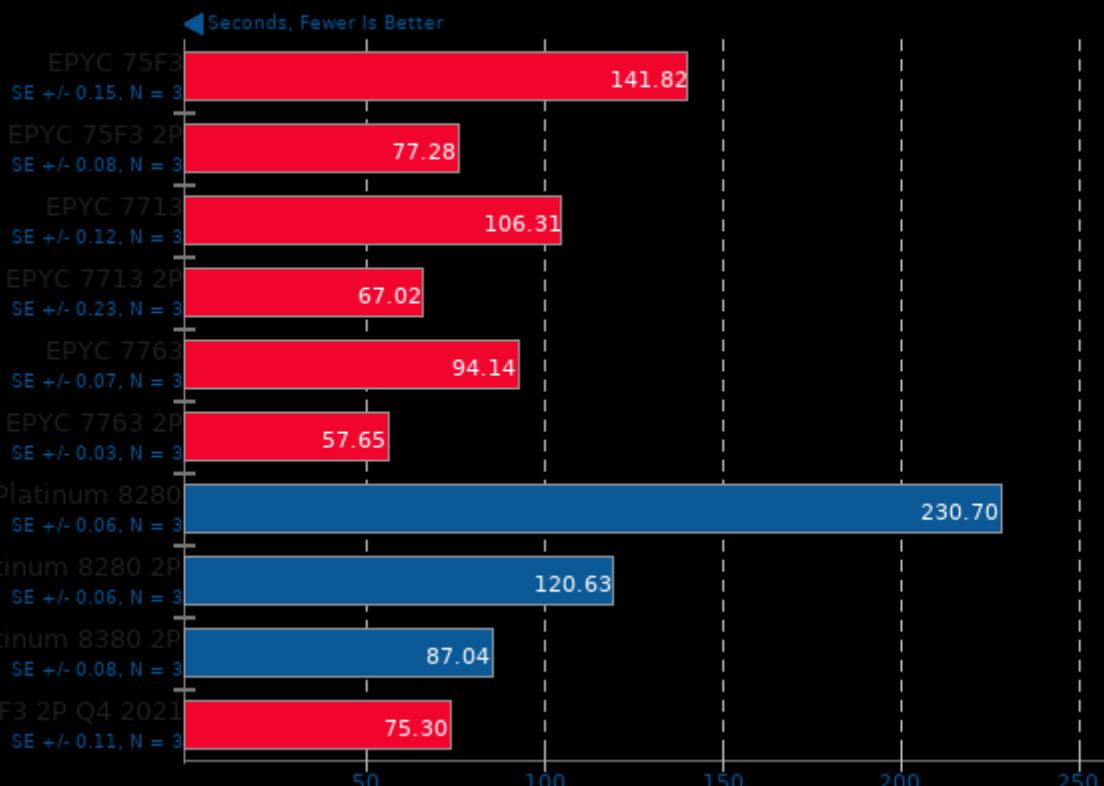
Blend File: Classroom - Compute: CPU-Only



Initial Intel Xeon Platinum 8380 2P Benchmarks

Blender 2.92

Blend File: Pabellon Barcelona - Compute: CPU-Only



Timed Wasmer Compilation 1.0.2

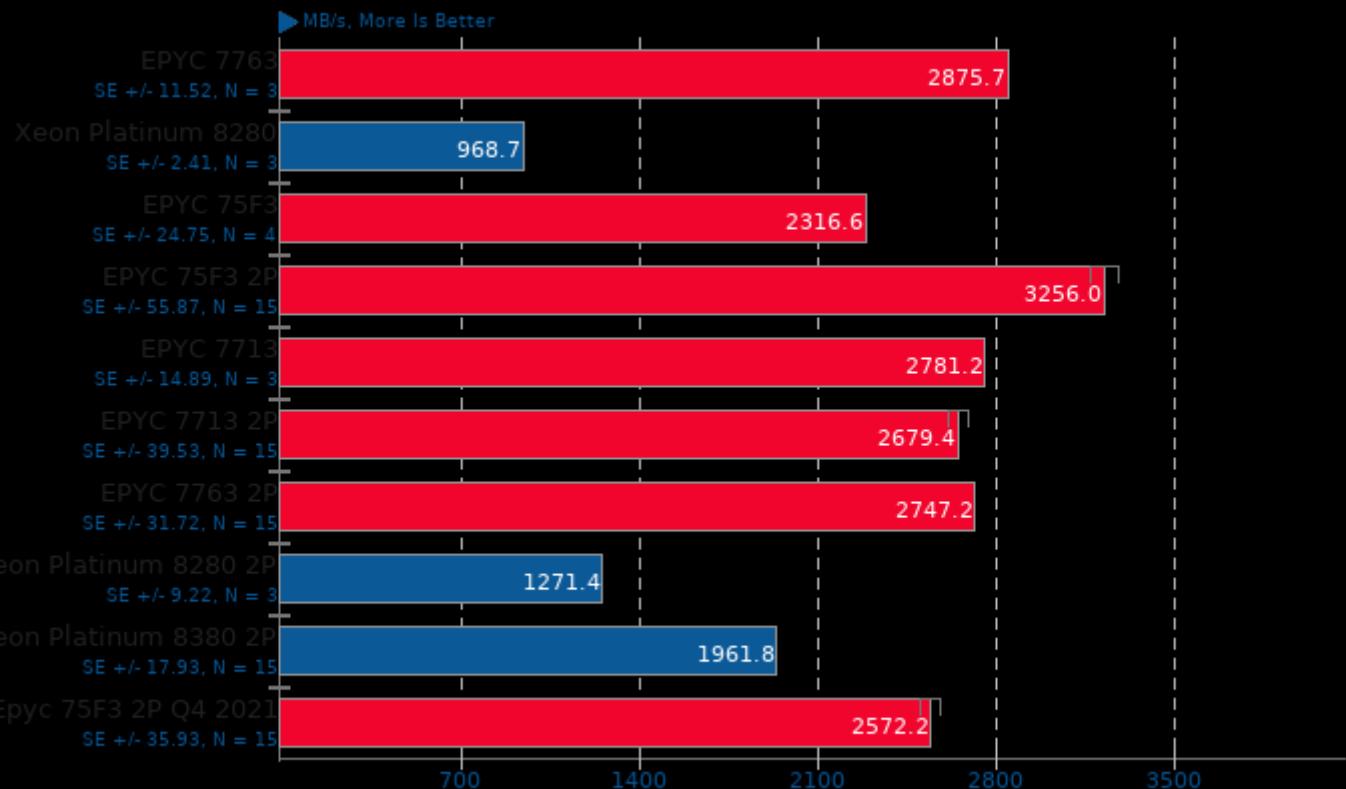
Time To Compile



1. (CC) gcc options: -m64 -pie -nodefaultlibs -ldl -lrt -lpthread -lgcc_s -lc -lm -util

Zstd Compression 1.4.9

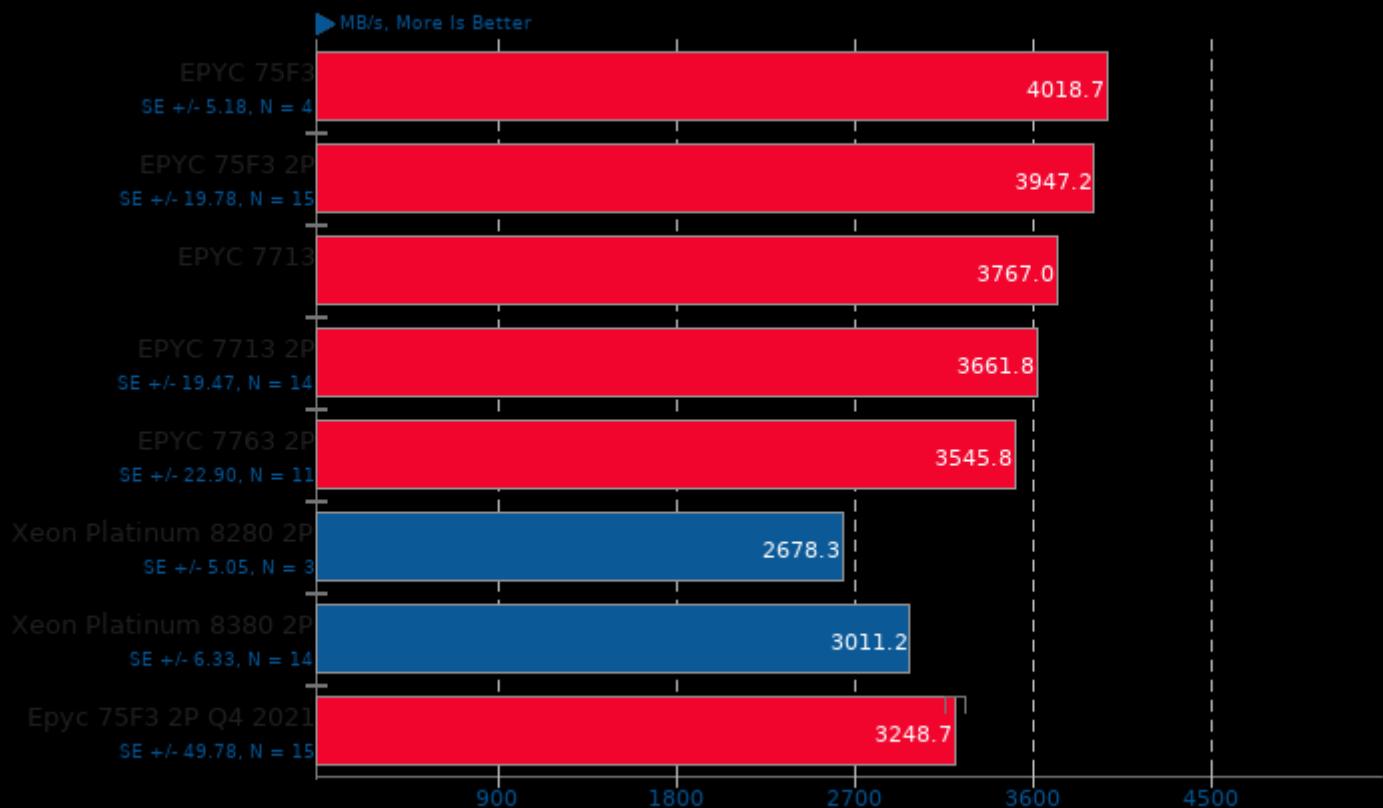
Compression Level: 8 - Compression Speed



1. (CC) gcc options: -O3 -pthread -lz -lzma

Zstd Compression 1.4.9

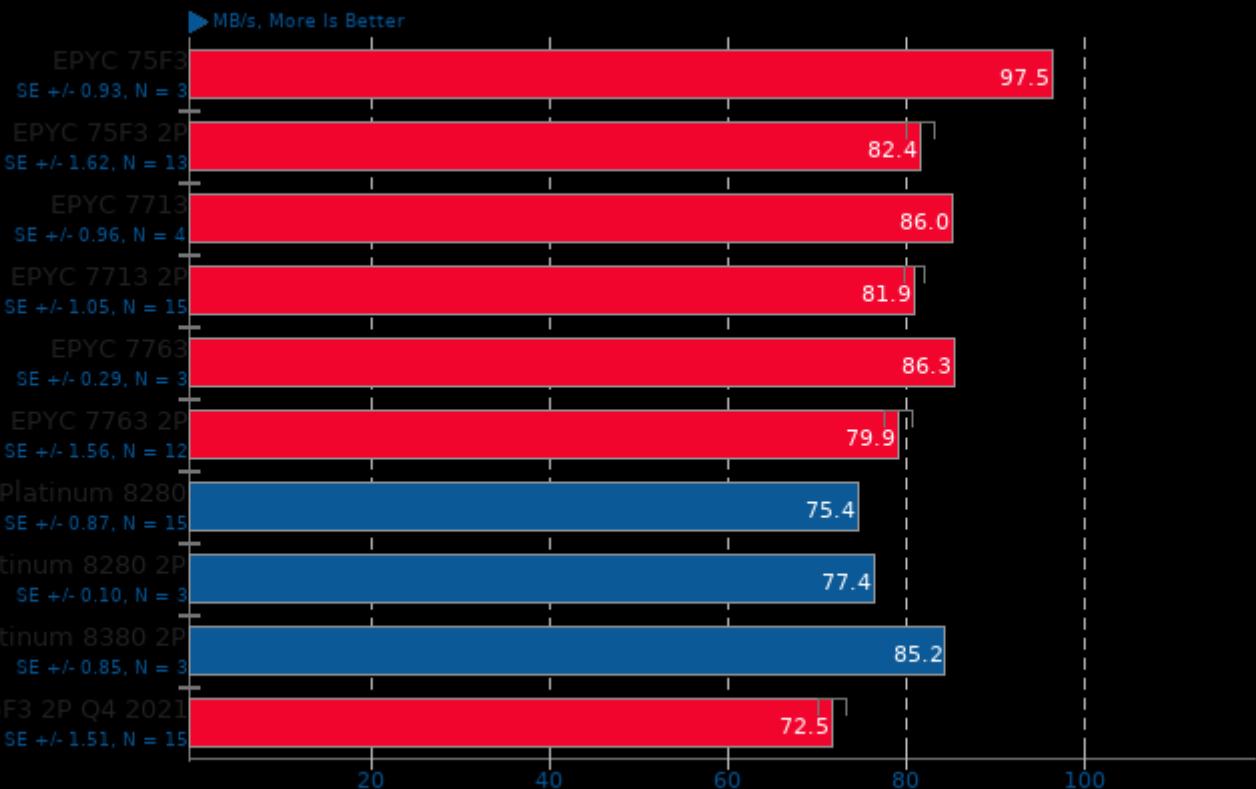
Compression Level: 8 - Decompression Speed



1. (CC) gcc options: -O3 -pthread -lz -lzma

Zstd Compression 1.4.9

Compression Level: 19 - Compression Speed



1. (CC) gcc options: -O3 -pthread -lz -lzma

Zstd Compression 1.4.9

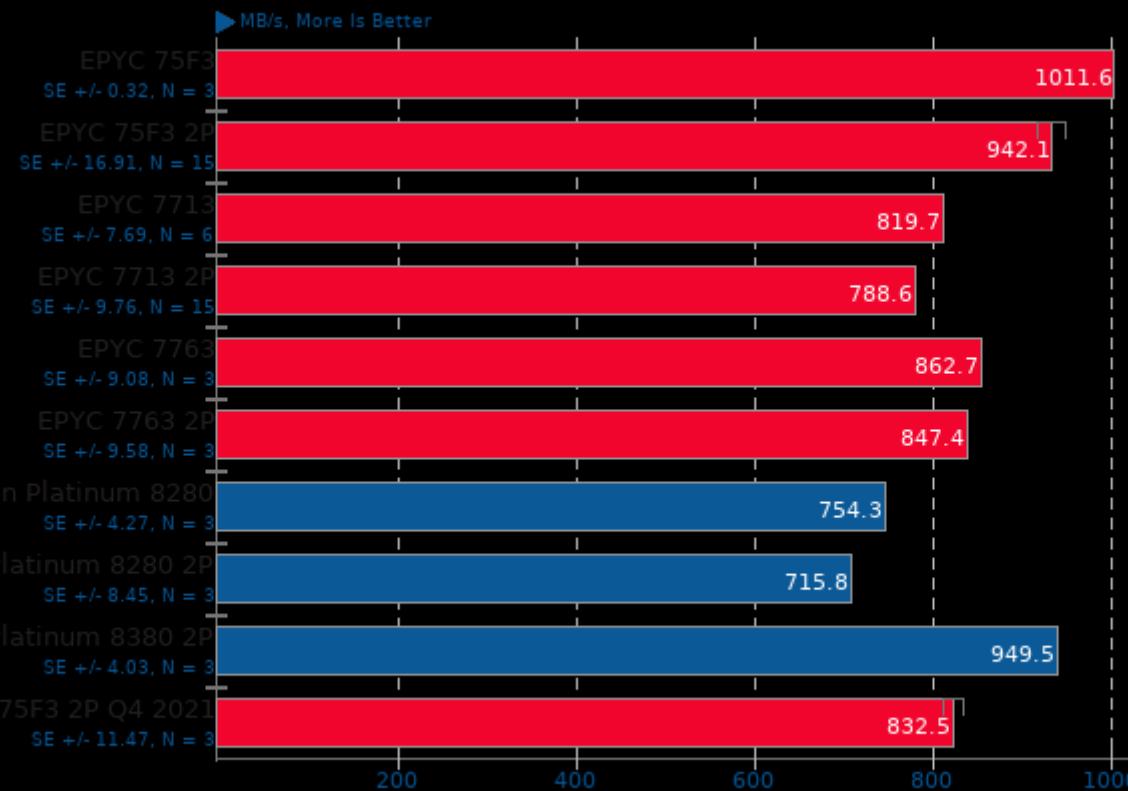
Compression Level: 19 - Decompression Speed



1. (CC) gcc options: -O3 -pthread -lz -lzma

Zstd Compression 1.4.9

Compression Level: 8, Long Mode - Compression Speed



1. (CC) gcc options: -O3 -pthread -lz -lzma

Zstd Compression 1.4.9

Compression Level: 8, Long Mode - Decompression Speed



1. (CC) gcc options: -O3 -pthread -lz -lzma

Initial Intel Xeon Platinum 8380 2P Benchmarks

Zstd Compression 1.4.9

Compression Level: 19, Long Mode - Compression Speed

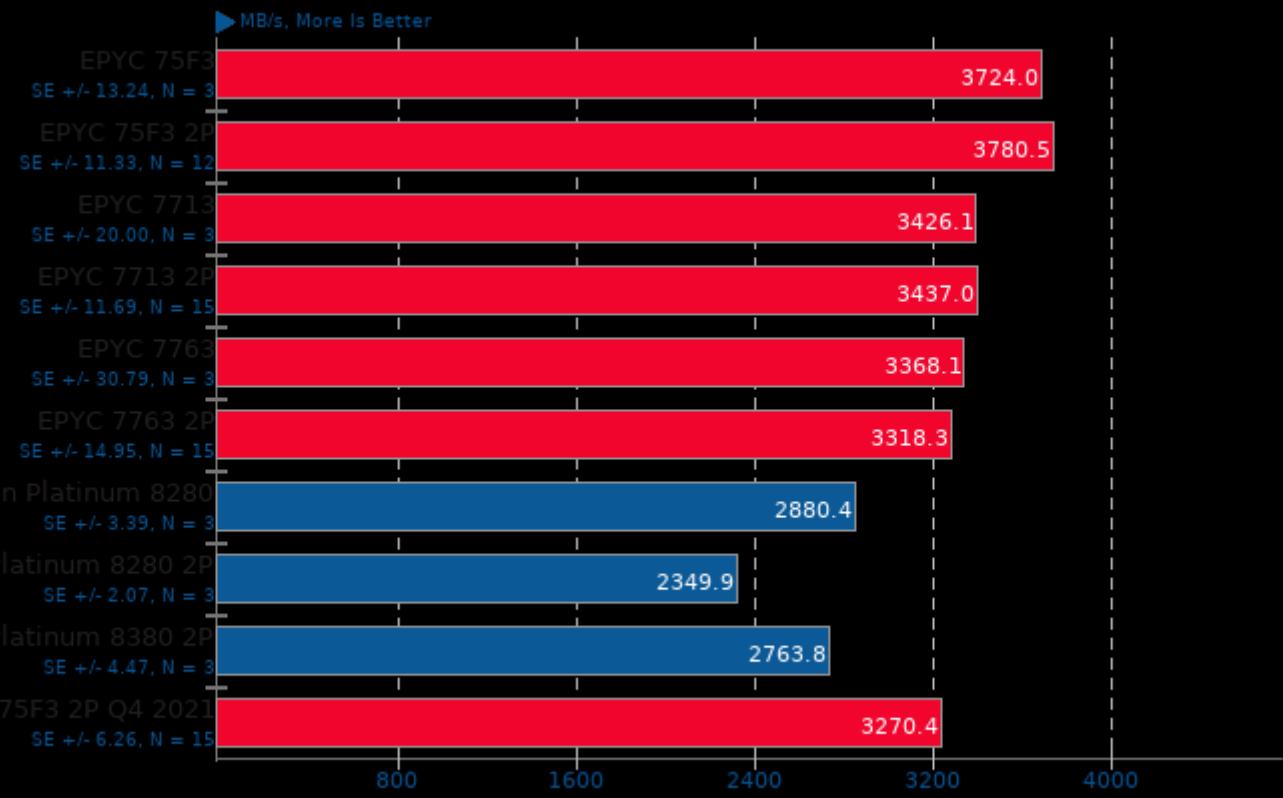


1. (CC) gcc options: -O3 -pthread -lz -lzma

Initial Intel Xeon Platinum 8380 2P Benchmarks

Zstd Compression 1.4.9

Compression Level: 19, Long Mode - Decompression Speed

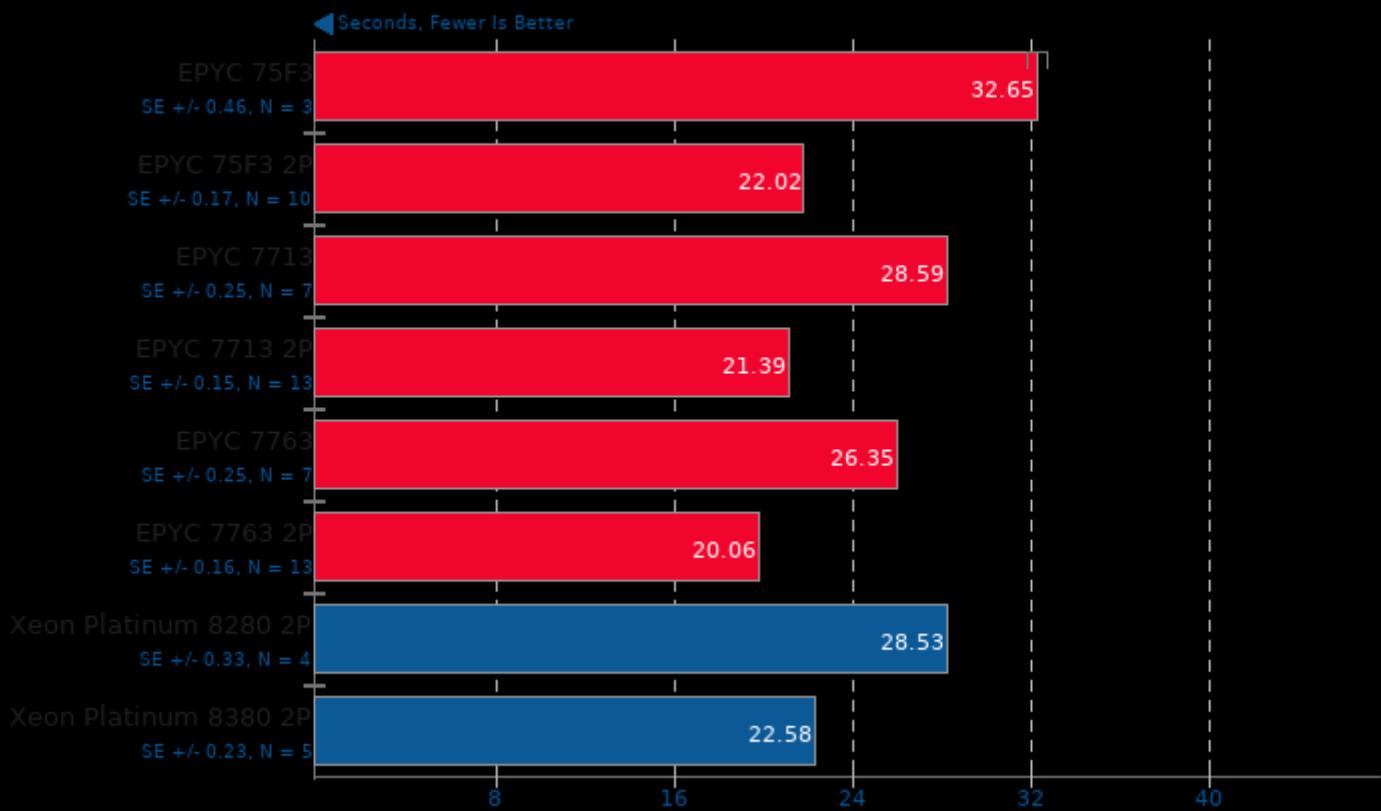


1. (CC) gcc options: -O3 -pthread -lz -lzma

Initial Intel Xeon Platinum 8380 2P Benchmarks

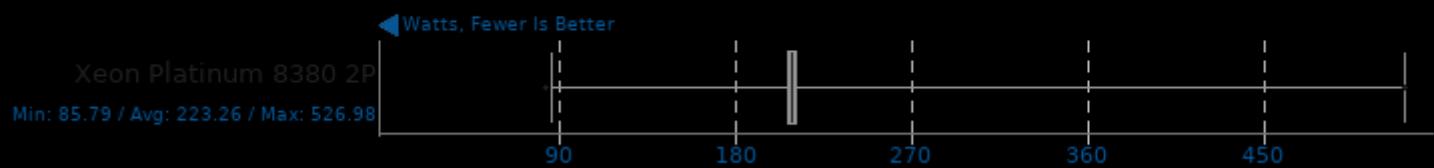
Timed Linux Kernel Compilation 5.10.20

Time To Compile



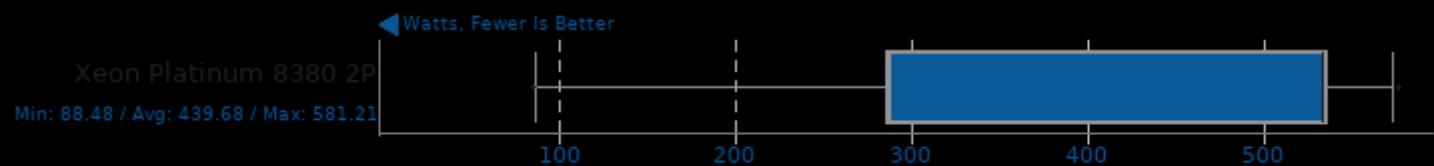
OSPray 1.8.5

CPU Power Consumption Monitor



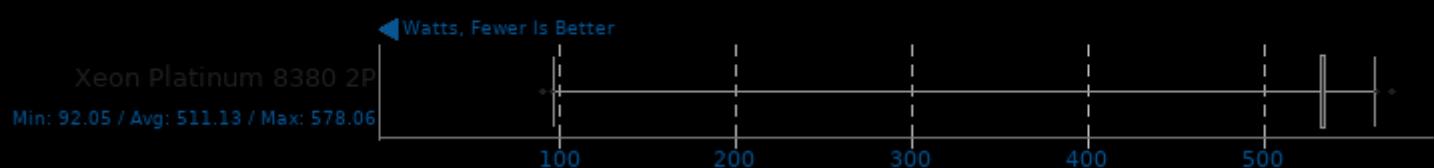
Blender 2.90

CPU Power Consumption Monitor



Blender 2.90

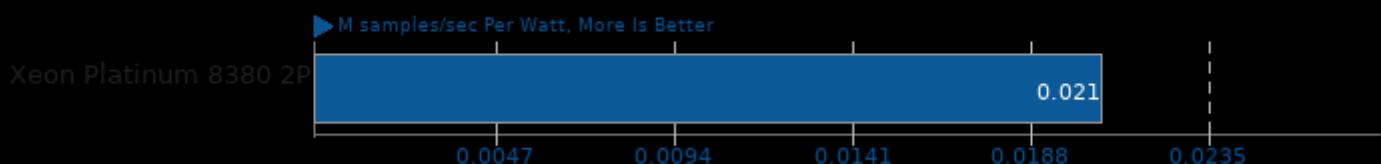
CPU Power Consumption Monitor



Initial Intel Xeon Platinum 8380 2P Benchmarks

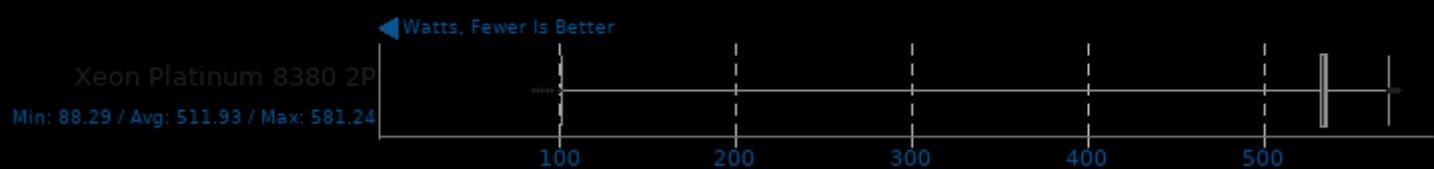
LuxCoreRender 2.3

Scene: DLSC



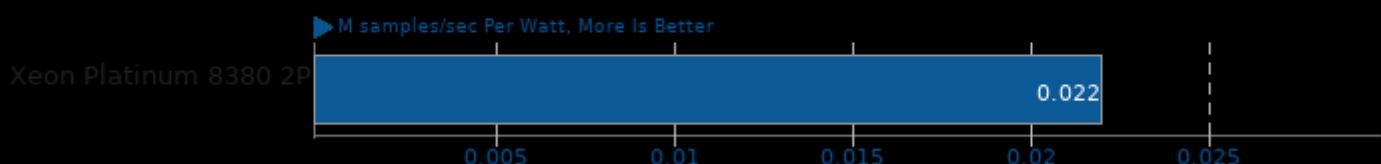
LuxCoreRender 2.3

CPU Power Consumption Monitor



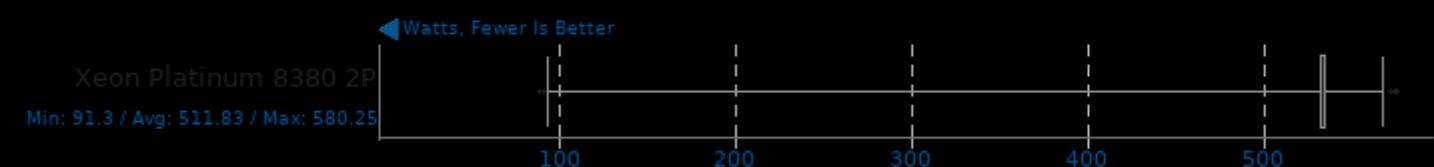
LuxCoreRender 2.3

Scene: Rainbow Colors and Prism



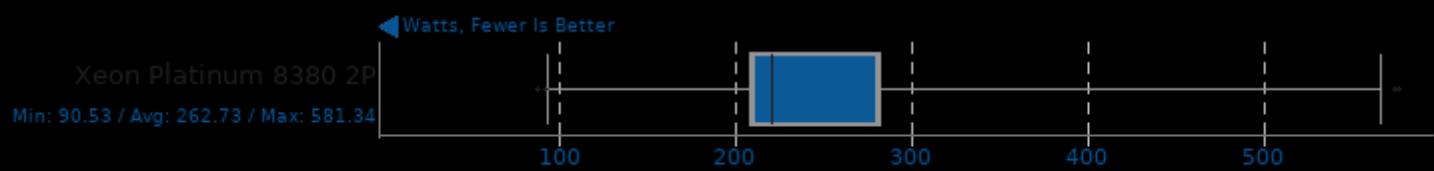
LuxCoreRender 2.3

CPU Power Consumption Monitor



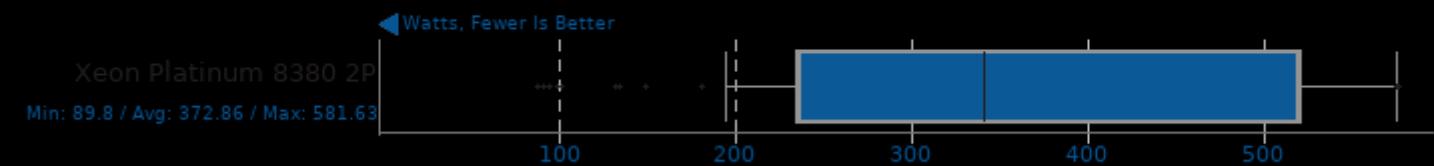
Timed ImageMagick Compilation 6.9.0

CPU Power Consumption Monitor



Timed LLVM Compilation 10.0

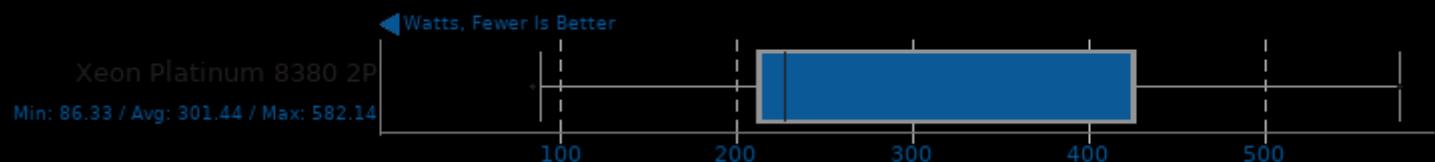
CPU Power Consumption Monitor



Initial Intel Xeon Platinum 8380 2P Benchmarks

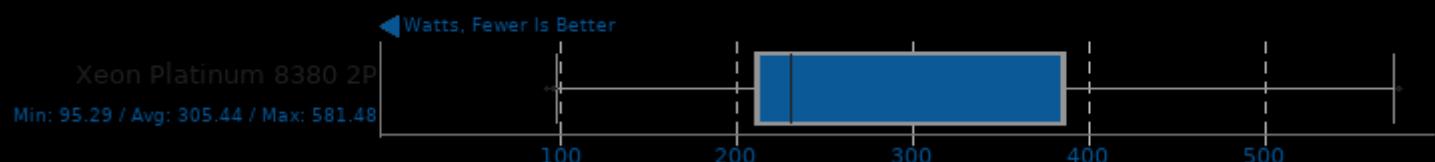
Timed FFmpeg Compilation 4.2.2

CPU Power Consumption Monitor



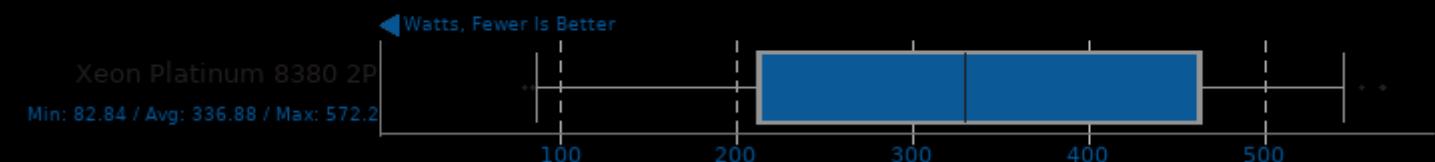
Build2 0.13

CPU Power Consumption Monitor



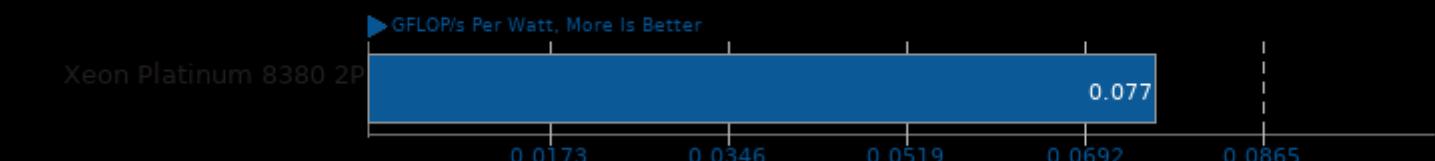
Timed Godot Game Engine Compilation 3.2.3

CPU Power Consumption Monitor



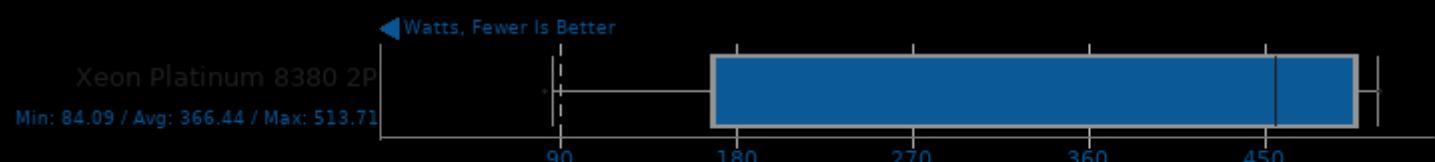
ACES DGEMM 1.0

Sustained Floating-Point Rate



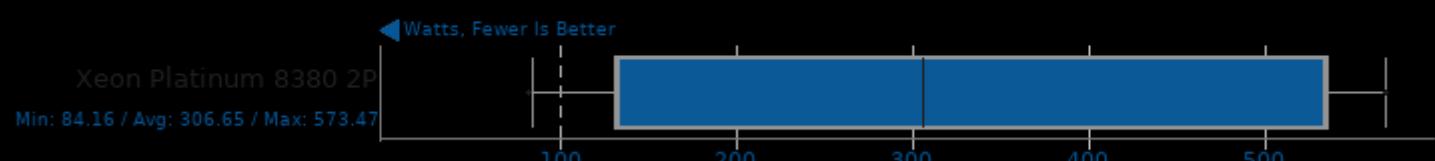
ACES DGEMM 1.0

CPU Power Consumption Monitor



FFTE 7.0

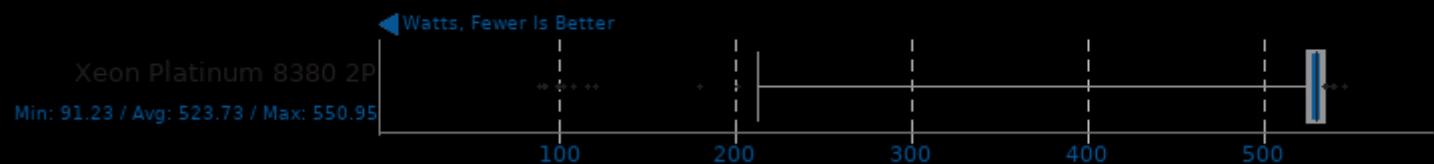
CPU Power Consumption Monitor



Initial Intel Xeon Platinum 8380 2P Benchmarks

High Performance Conjugate Gradient 3.1

CPU Power Consumption Monitor



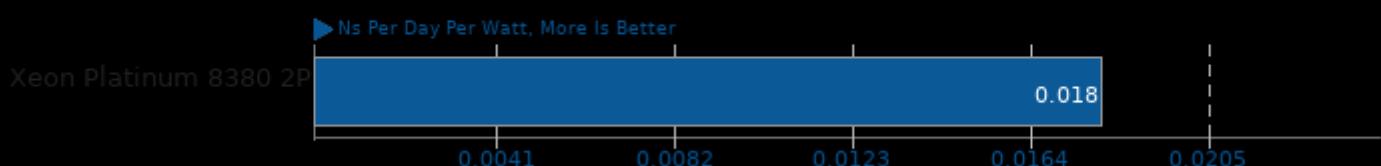
LULESH 2.0.3

CPU Power Consumption Monitor



GROMACS 2020.3

Water Benchmark



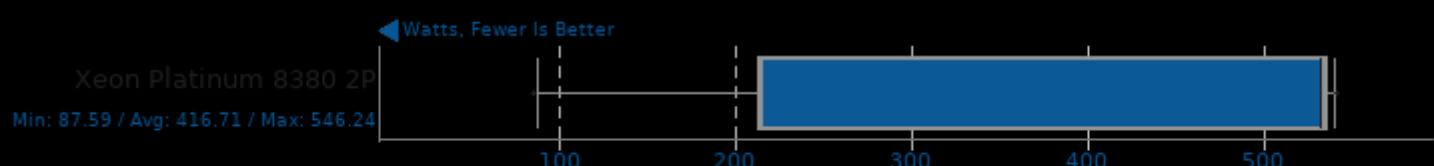
NAS Parallel Benchmarks 3.4

CPU Power Consumption Monitor



NAS Parallel Benchmarks 3.4

CPU Power Consumption Monitor



Numpy Benchmark

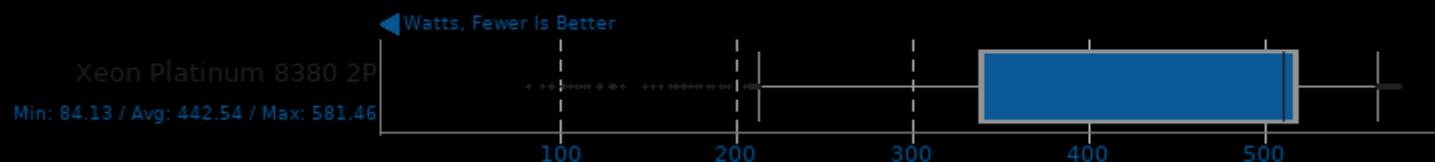
CPU Power Consumption Monitor



Initial Intel Xeon Platinum 8380 2P Benchmarks

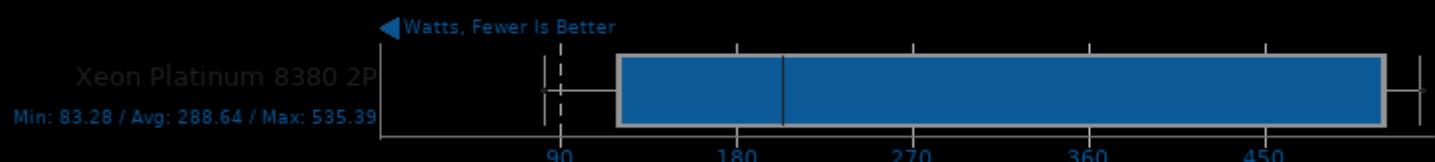
Quantum ESPRESSO 6.7

CPU Power Consumption Monitor



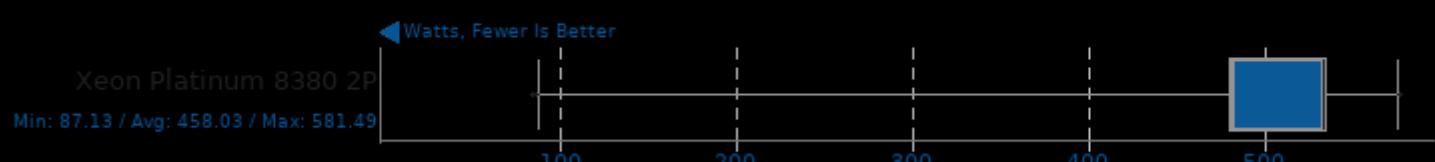
Rodinia 3.1

CPU Power Consumption Monitor



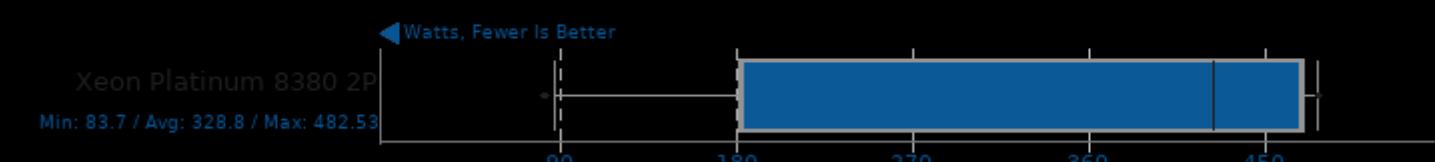
Rodinia 3.1

CPU Power Consumption Monitor



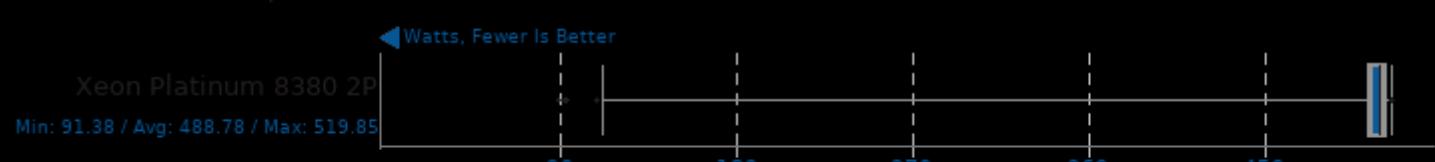
Rodinia 3.1

CPU Power Consumption Monitor



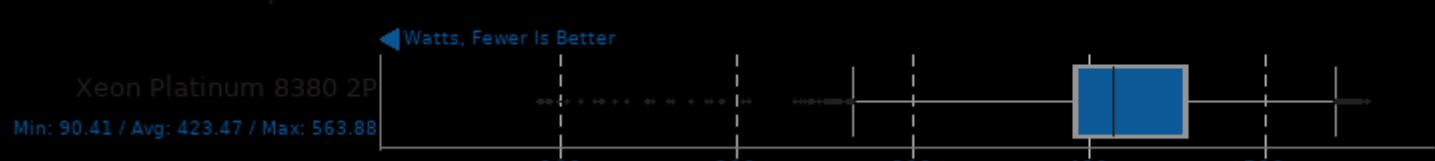
Caffe 2020-02-13

CPU Power Consumption Monitor



LeelaChessZero 0.26

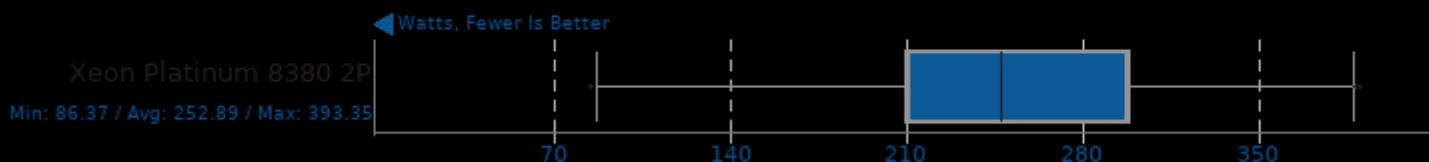
CPU Power Consumption Monitor



Initial Intel Xeon Platinum 8380 2P Benchmarks

Numenta Anomaly Benchmark 1.1

CPU Power Consumption Monitor



Numenta Anomaly Benchmark 1.1

CPU Power Consumption Monitor



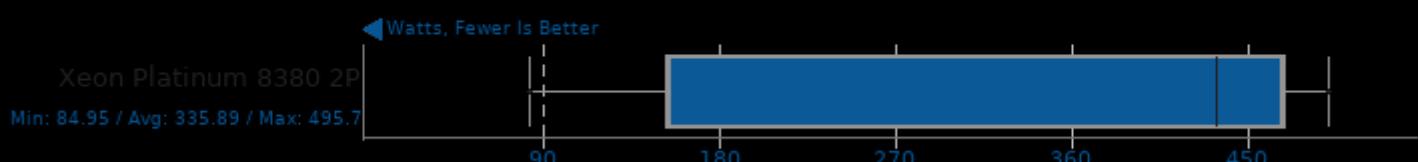
Numenta Anomaly Benchmark 1.1

CPU Power Consumption Monitor



oneDNN 2.0

CPU Power Consumption Monitor



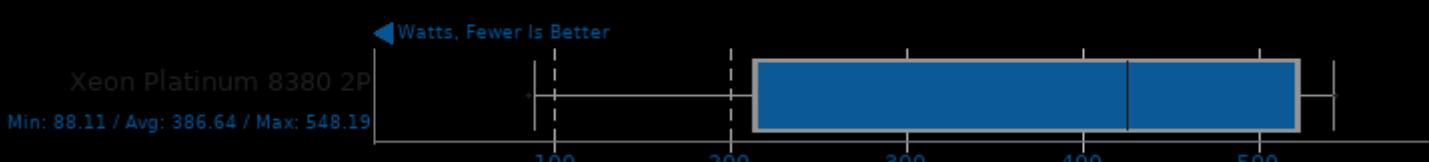
oneDNN 2.0

CPU Power Consumption Monitor



oneDNN 2.0

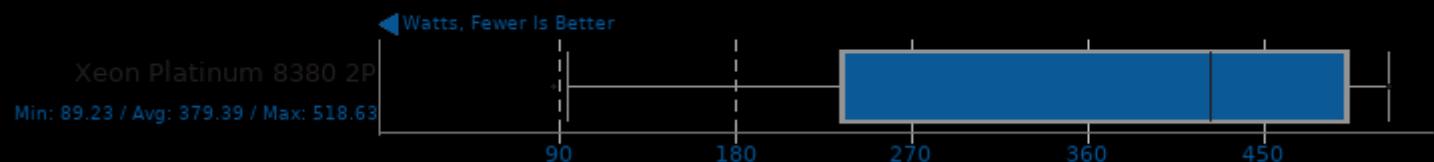
CPU Power Consumption Monitor



Initial Intel Xeon Platinum 8380 2P Benchmarks

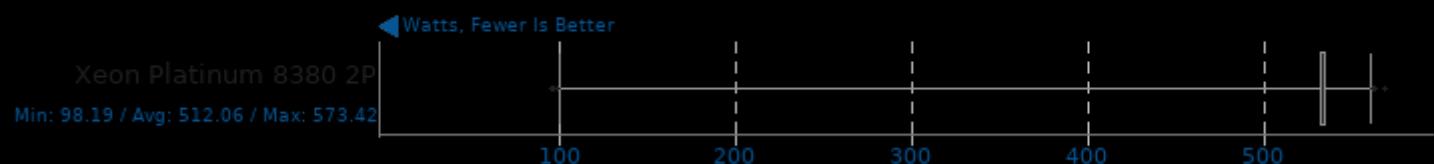
oneDNN 2.0

CPU Power Consumption Monitor



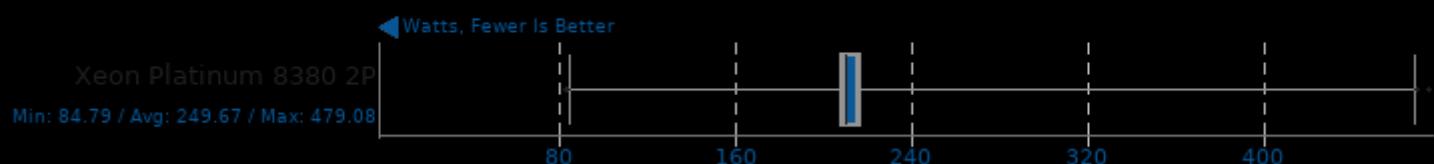
TensorFlow Lite 2020-08-23

CPU Power Consumption Monitor



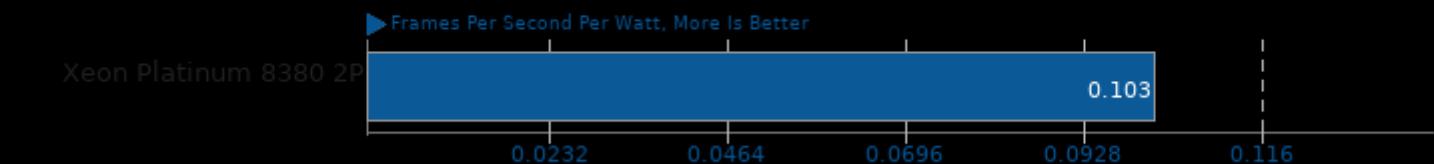
dav1d 0.8.1

CPU Power Consumption Monitor



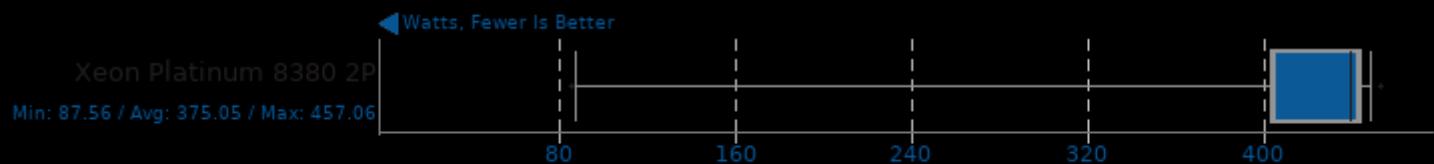
Kvazaar 2.0

Video Input: Bosphorus 4K - Video Preset: Very Fast



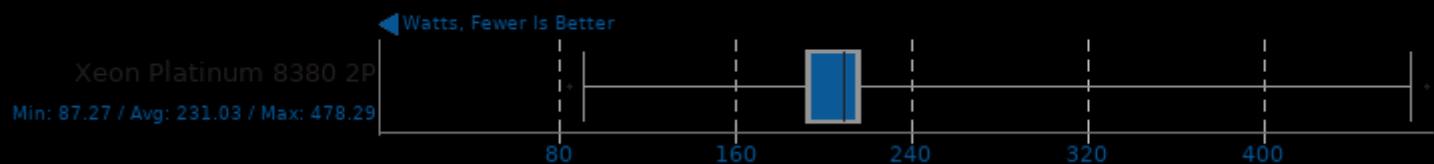
Kvazaar 2.0

CPU Power Consumption Monitor



SVT-AV1 0.8

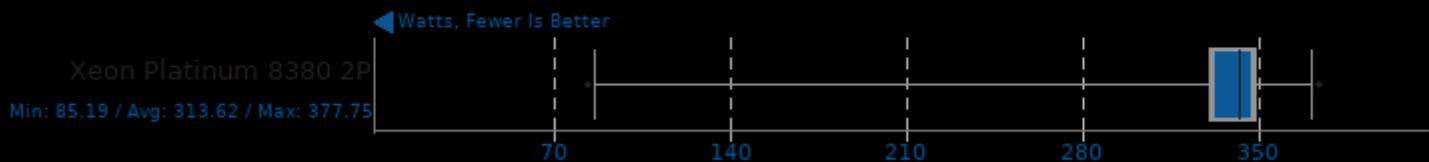
CPU Power Consumption Monitor



Initial Intel Xeon Platinum 8380 2P Benchmarks

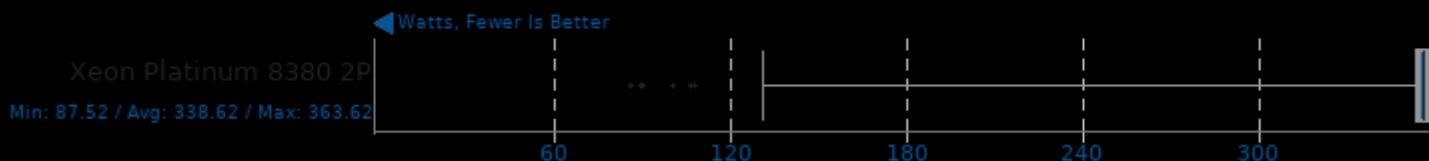
x265 3.4

CPU Power Consumption Monitor



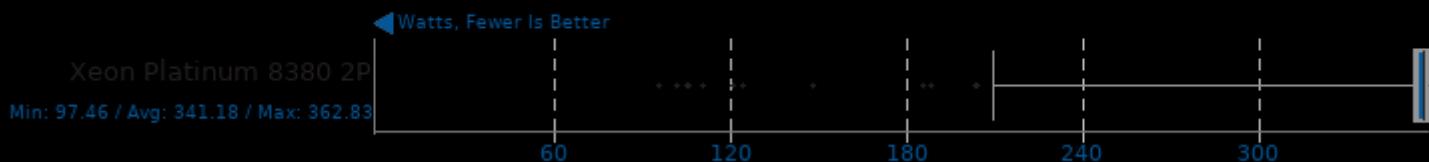
WebP2 Image Encode 20210126

CPU Power Consumption Monitor



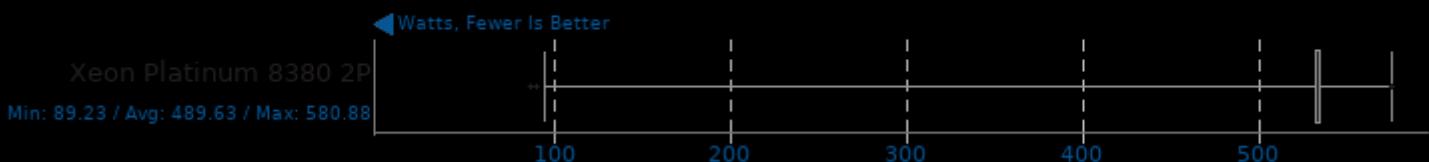
WebP2 Image Encode 20210126

CPU Power Consumption Monitor



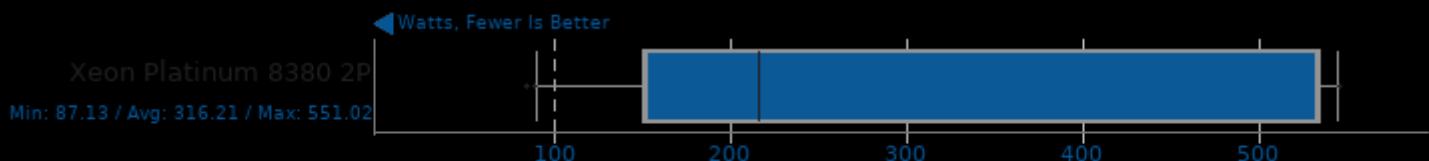
Aircrack-ng 1.5.2

CPU Power Consumption Monitor



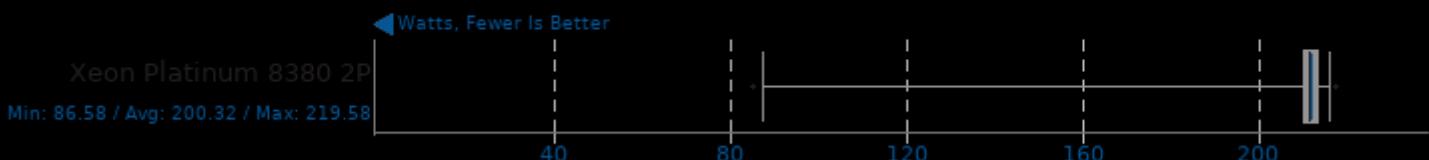
PostgreSQL pgbench 13.0

CPU Power Consumption Monitor



PyBench 2018-02-16

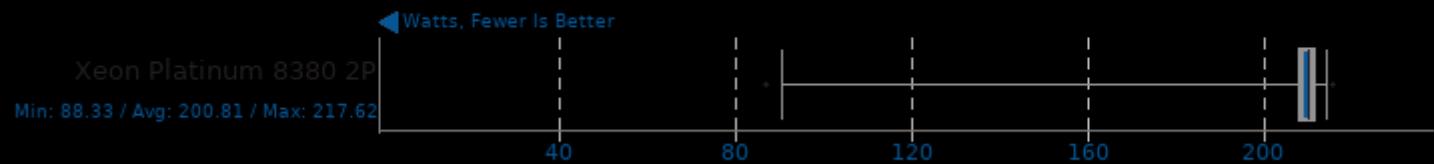
CPU Power Consumption Monitor



Initial Intel Xeon Platinum 8380 2P Benchmarks

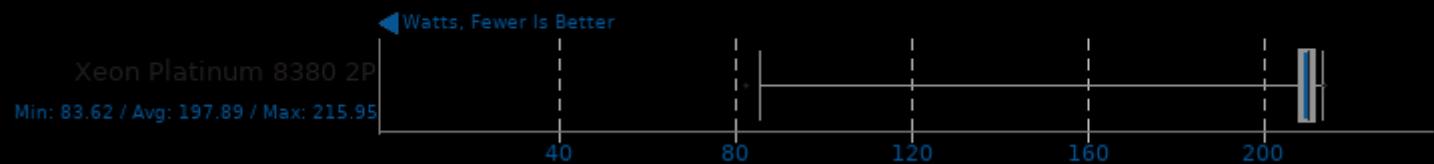
PyPerformance 1.0.0

CPU Power Consumption Monitor



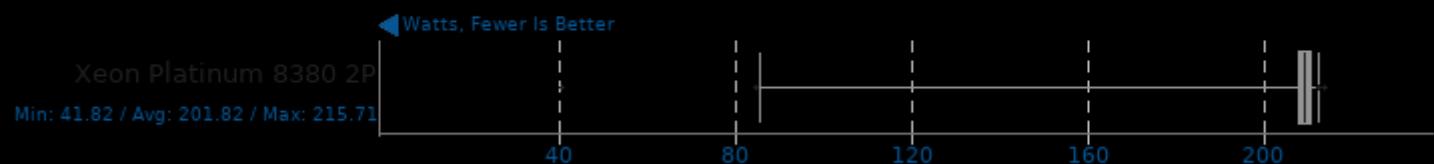
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CPU Power Consumption Monitor



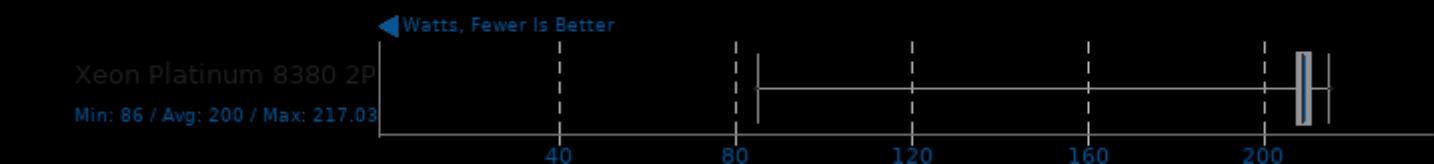
PyPerformance 1.0.0

CPU Power Consumption Monitor



PHPBench 0.8.1

CPU Power Consumption Monitor



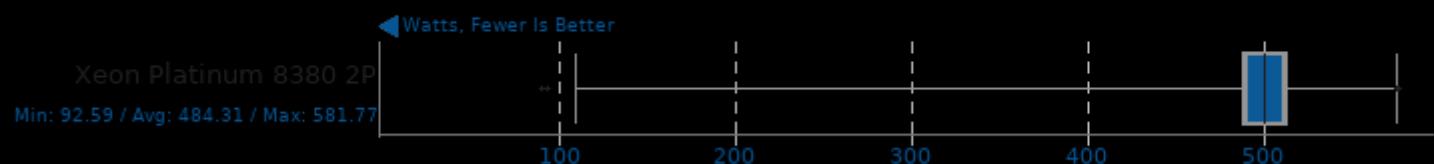
Facebook RocksDB 6.3.6

CPU Power Consumption Monitor



Facebook RocksDB 6.3.6

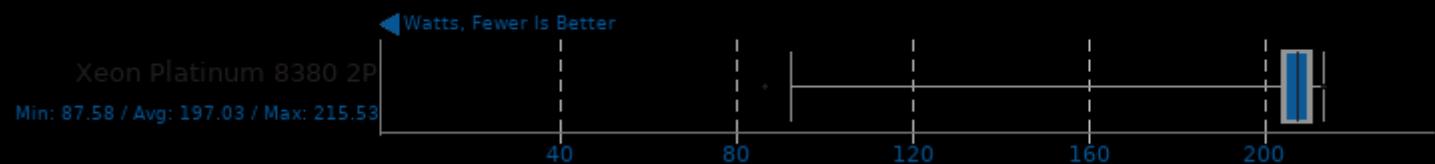
CPU Power Consumption Monitor



Initial Intel Xeon Platinum 8380 2P Benchmarks

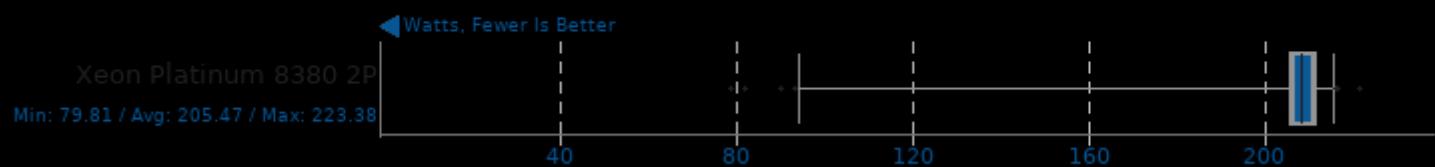
Botan 2.13.0

CPU Power Consumption Monitor



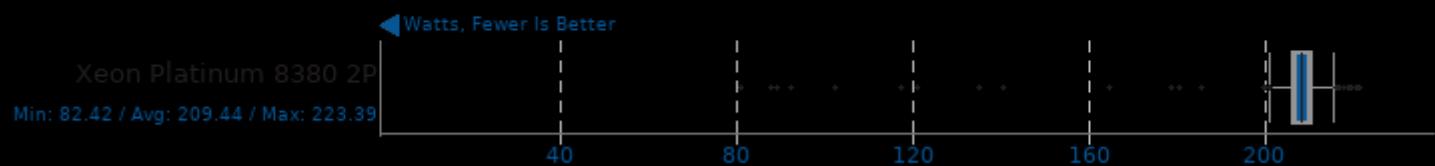
Crypto++ 8.2

CPU Power Consumption Monitor



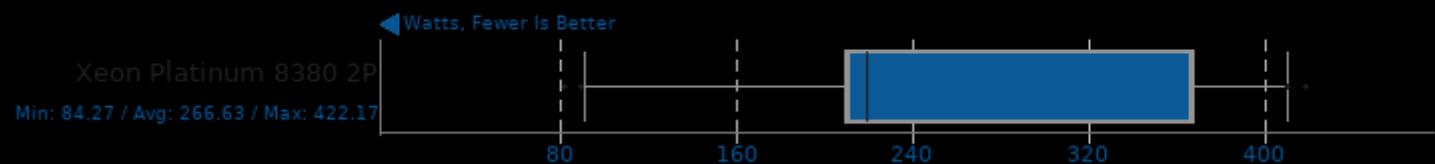
Crypto++ 8.2

CPU Power Consumption Monitor



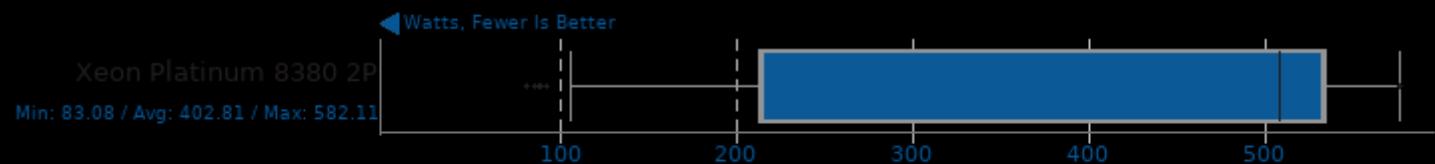
Zstd Compression 1.4.5

CPU Power Consumption Monitor



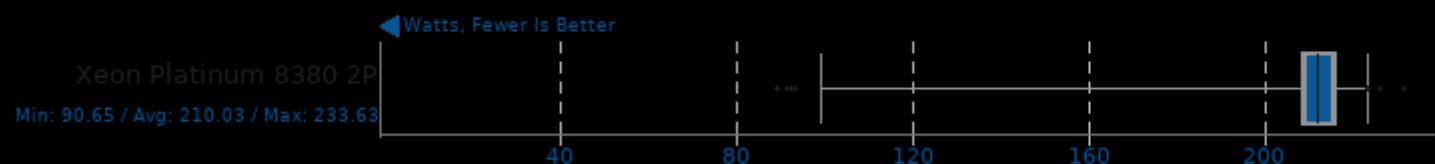
7-Zip Compression 16.02

CPU Power Consumption Monitor



LZ4 Compression 1.9.3

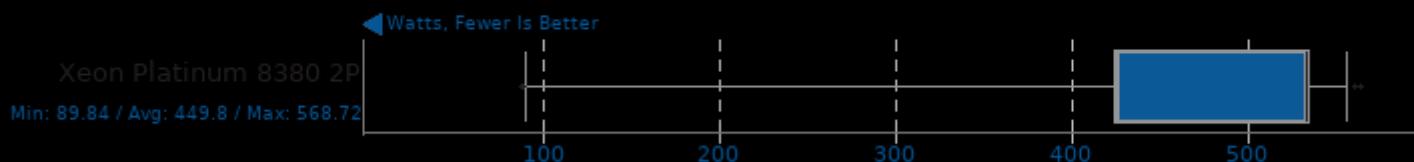
CPU Power Consumption Monitor



Initial Intel Xeon Platinum 8380 2P Benchmarks

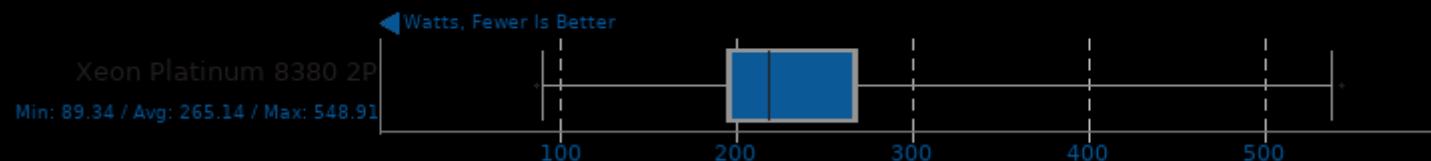
Coremark 1.0

CPU Power Consumption Monitor



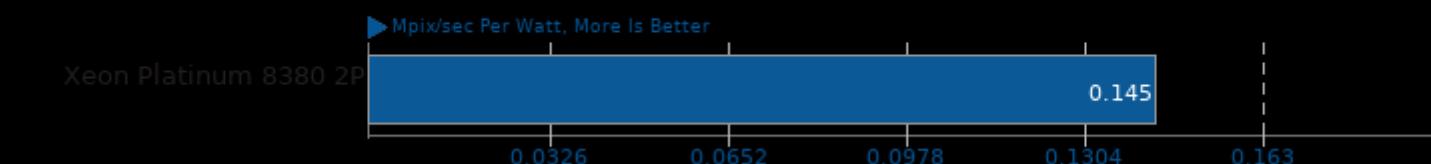
OCRMyPDF 9.6.0+dfsg

CPU Power Consumption Monitor



LibRaw 0.20

Post-Processing Benchmark



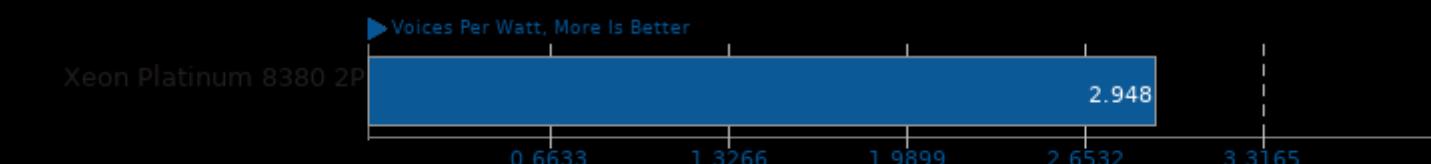
LibRaw 0.20

CPU Power Consumption Monitor



Google SynthMark 20201109

Test: VoiceMark_100



Google SynthMark 20201109

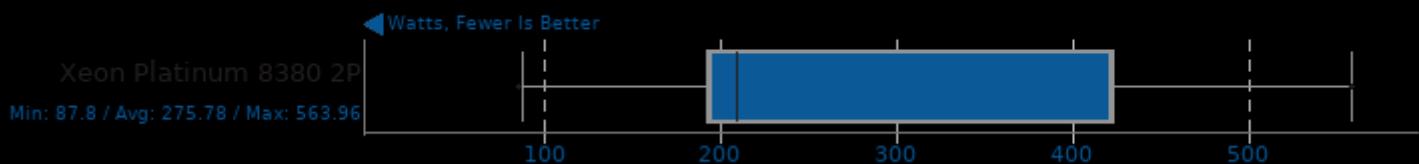
CPU Power Consumption Monitor



Initial Intel Xeon Platinum 8380 2P Benchmarks

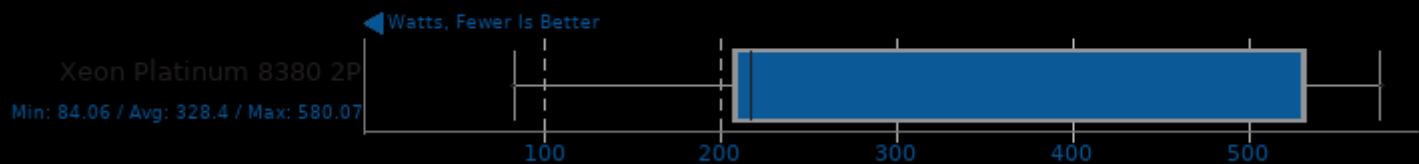
Basis Universal 1.12

CPU Power Consumption Monitor



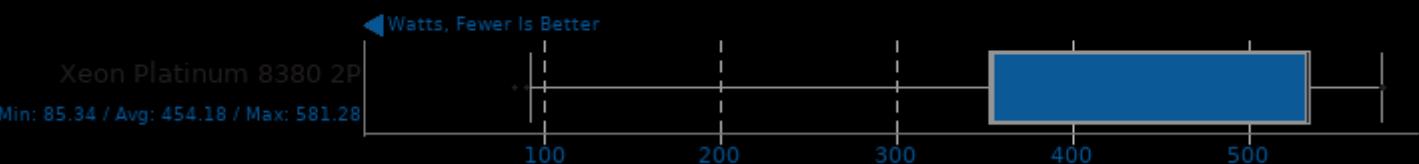
Basis Universal 1.12

CPU Power Consumption Monitor



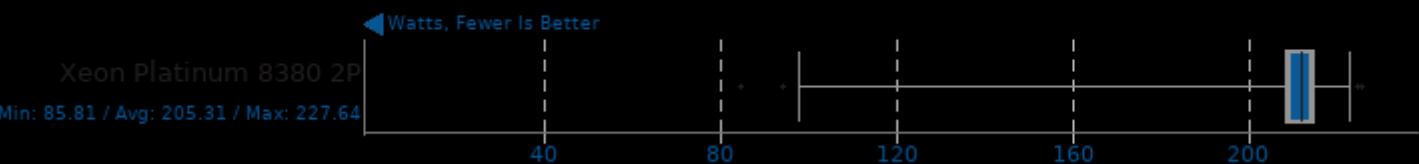
ASTC Encoder 2.0

CPU Power Consumption Monitor



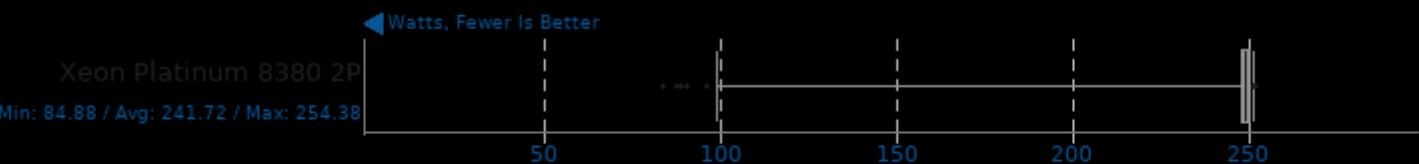
QuantLib 1.21

CPU Power Consumption Monitor



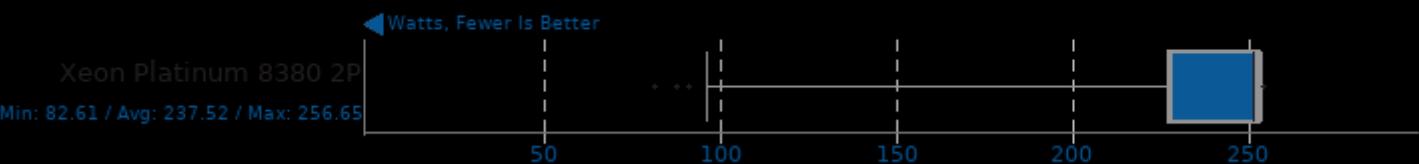
FinanceBench 2016-07-25

CPU Power Consumption Monitor



FinanceBench 2016-07-25

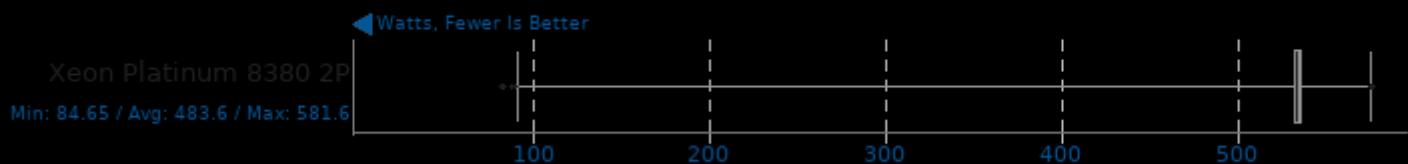
CPU Power Consumption Monitor



Initial Intel Xeon Platinum 8380 2P Benchmarks

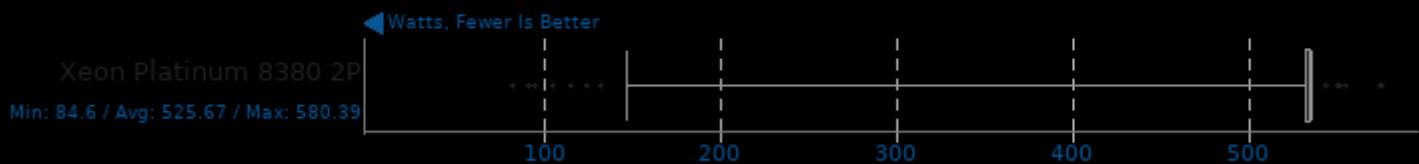
Stockfish 12

CPU Power Consumption Monitor



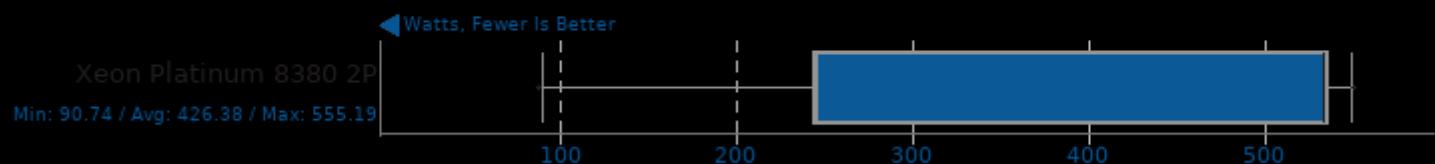
asmFish 2018-07-23

CPU Power Consumption Monitor



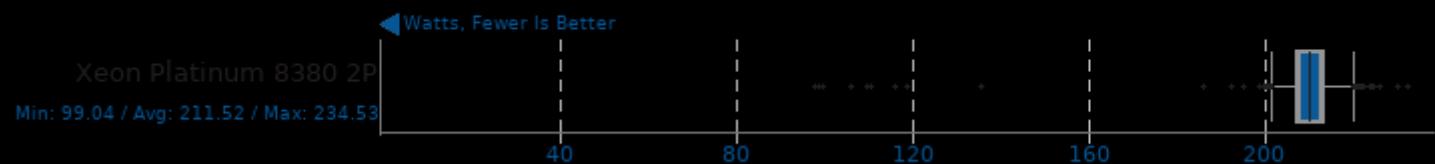
m-queens 1.2

CPU Power Consumption Monitor



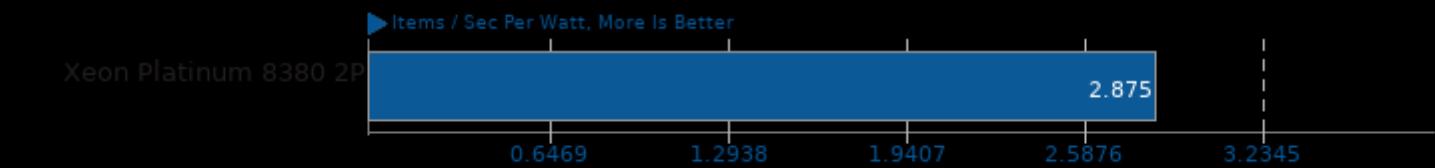
Hierarchical INTegration 1.0

CPU Power Consumption Monitor



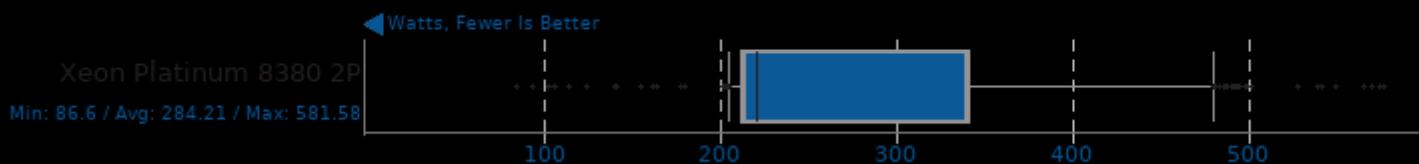
OpenVKL 0.9

Benchmark: vklBenchmark



OpenVKL 0.9

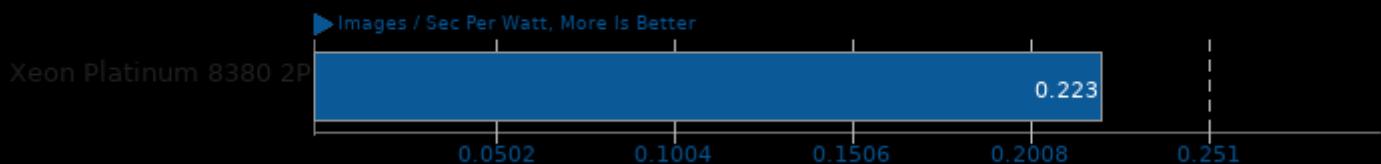
CPU Power Consumption Monitor



Initial Intel Xeon Platinum 8380 2P Benchmarks

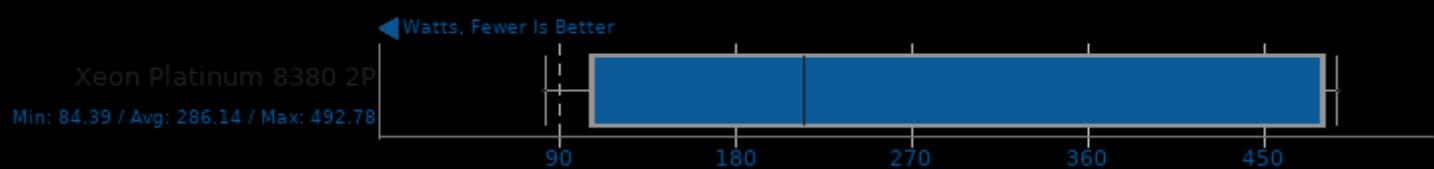
Intel Open Image Denoise 1.2.0

Scene: Memorial

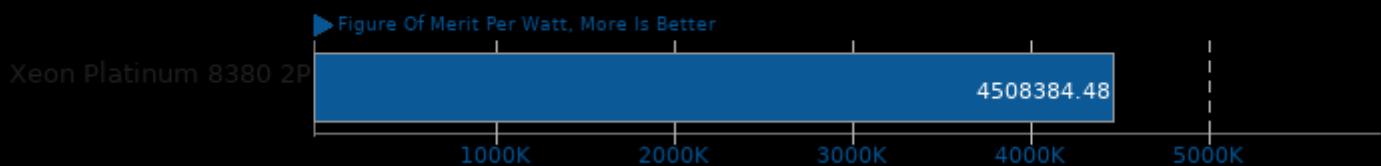


Intel Open Image Denoise 1.2.0

CPU Power Consumption Monitor

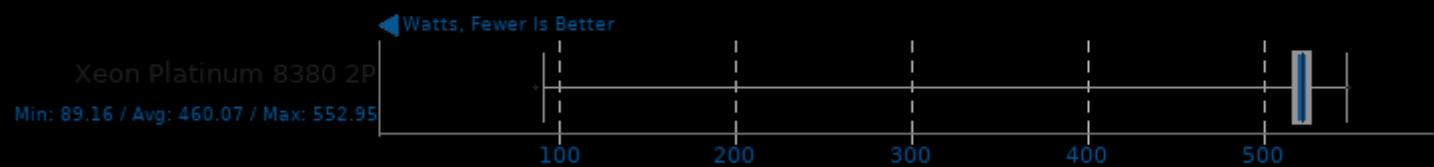


Algebraic Multi-Grid Benchmark 1.2



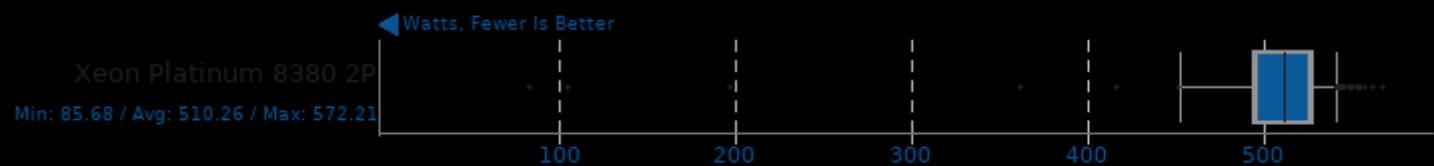
Algebraic Multi-Grid Benchmark 1.2

CPU Power Consumption Monitor



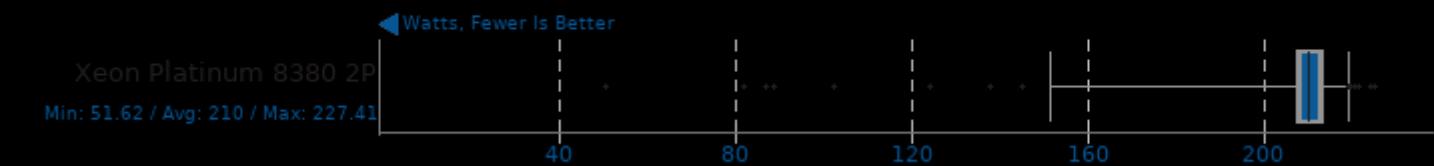
NWChem 7.0.2

CPU Power Consumption Monitor



Ngspice 34

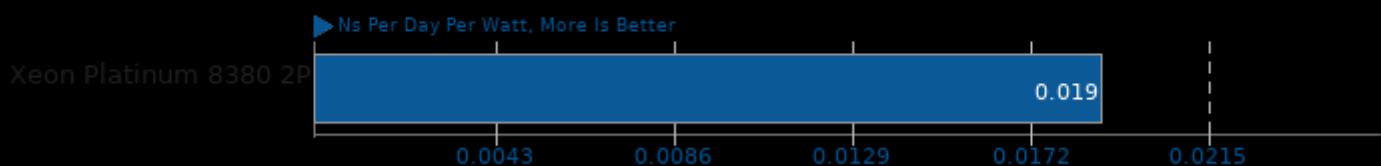
CPU Power Consumption Monitor



Initial Intel Xeon Platinum 8380 2P Benchmarks

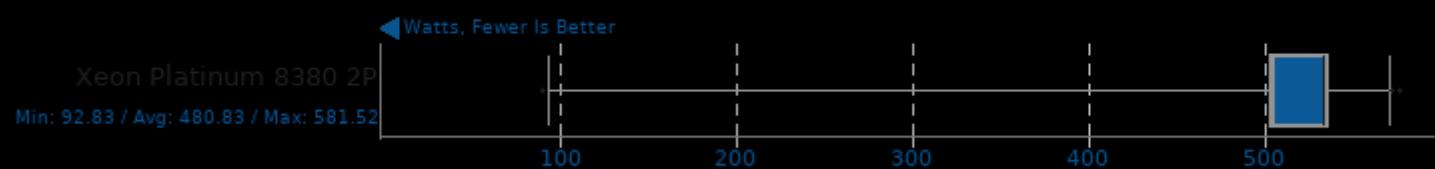
GROMACS 2021

Input: water_GMX50_bare



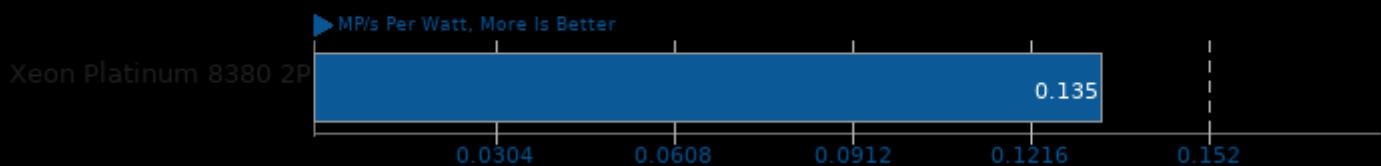
GROMACS 2021

CPU Power Consumption Monitor



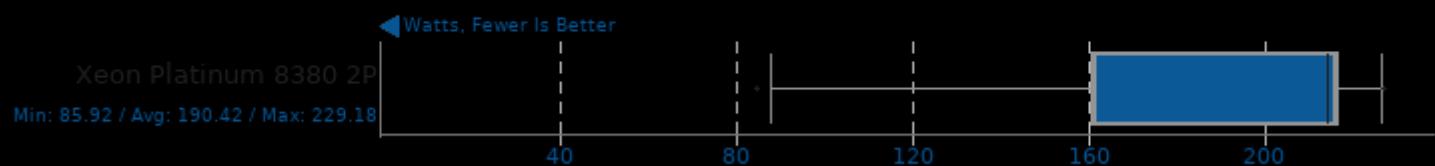
JPEG XL 0.3.1

Input: JPEG - Encode Speed: 8



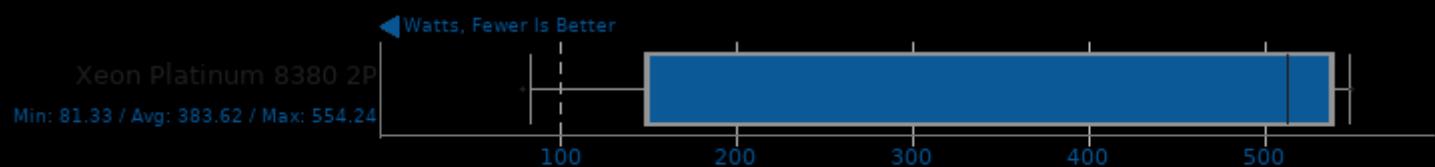
JPEG XL 0.3.1

CPU Power Consumption Monitor



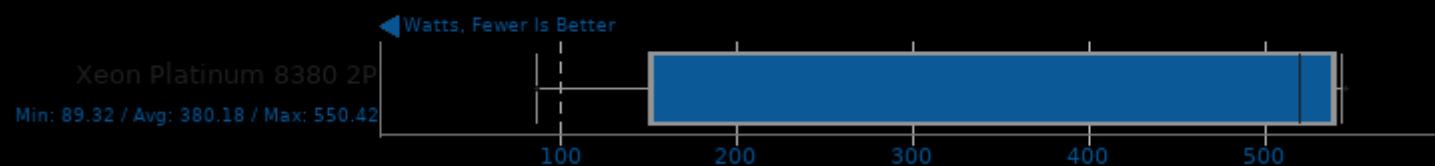
toyBrot Fractal Generator 2020-11-18

CPU Power Consumption Monitor



toyBrot Fractal Generator 2020-11-18

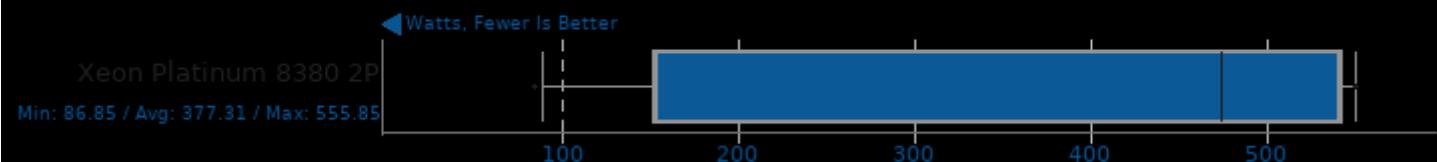
CPU Power Consumption Monitor



Initial Intel Xeon Platinum 8380 2P Benchmarks

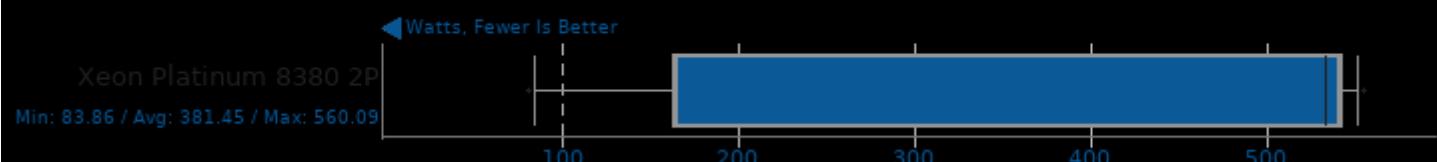
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CPU Power Consumption Monitor



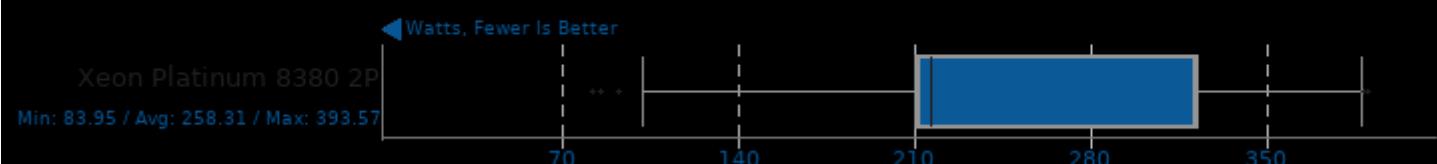
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CPU Power Consumption Monitor



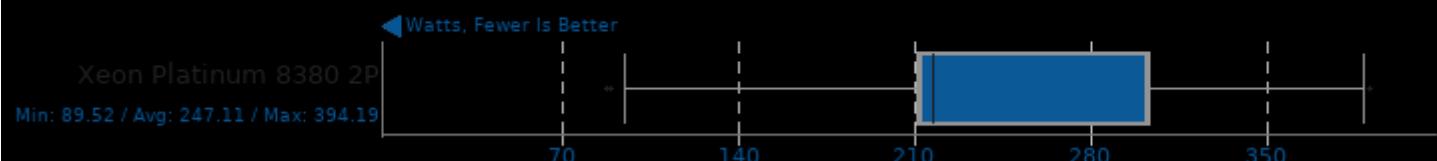
libavif avifenc 0.9.0

CPU Power Consumption Monitor



libavif avifenc 0.9.0

CPU Power Consumption Monitor



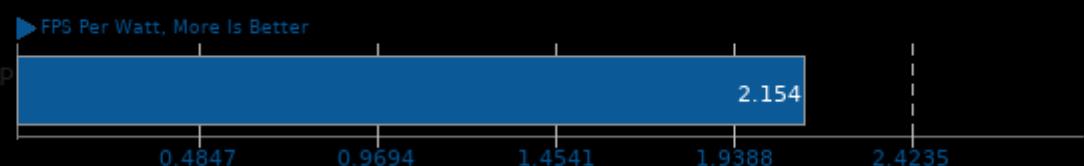
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CPU Power Consumption Monitor



dav1d 0.8.2

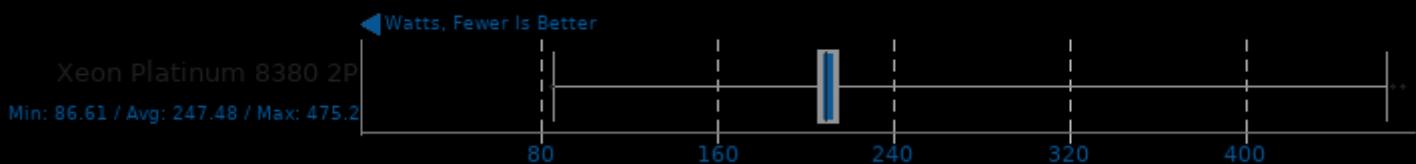
Video Input: Summer Nature 4K



Initial Intel Xeon Platinum 8380 2P Benchmarks

dav1d 0.8.2

CPU Power Consumption Monitor



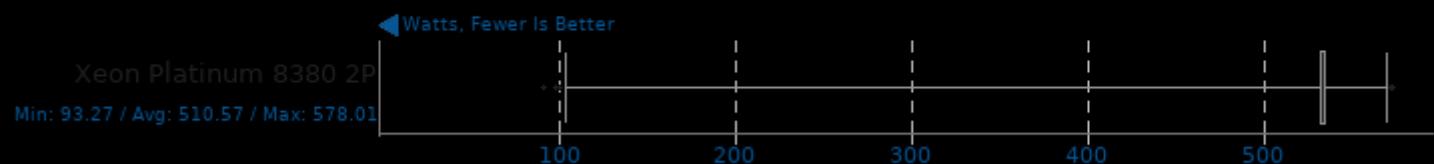
Blender 2.92

CPU Power Consumption Monitor



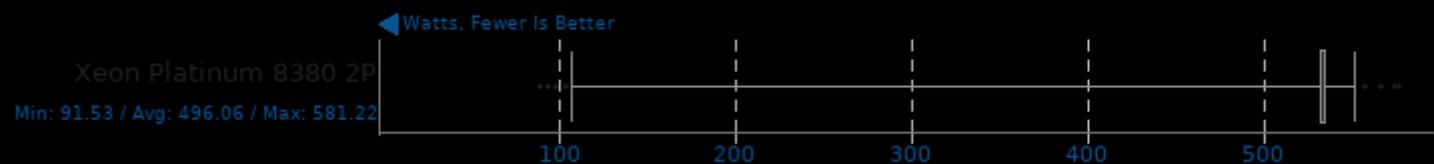
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CPU Power Consumption Monitor



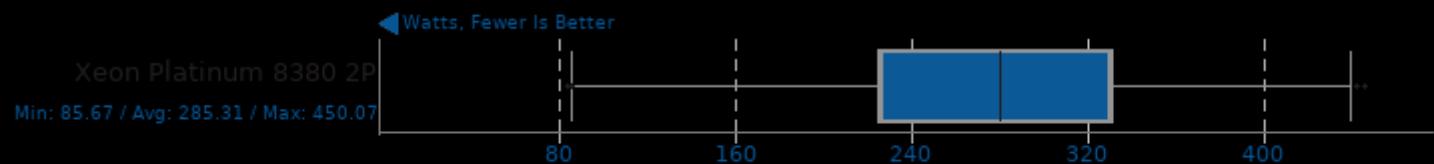
Blender 2.92

CPU Power Consumption Monitor



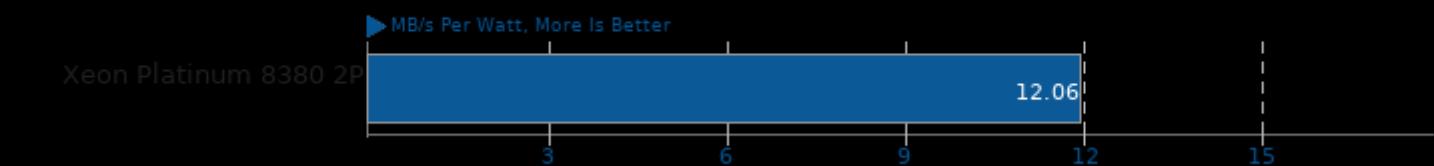
Timed Wasmer Compilation 1.0.2

CPU Power Consumption Monitor



Zstd Compression 1.4.9

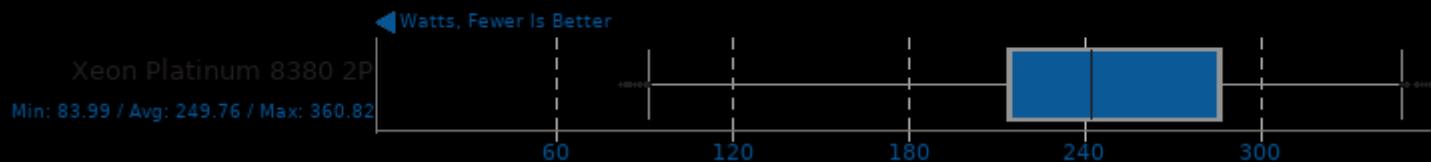
Compression Level: 8 - Decompression Speed



Initial Intel Xeon Platinum 8380 2P Benchmarks

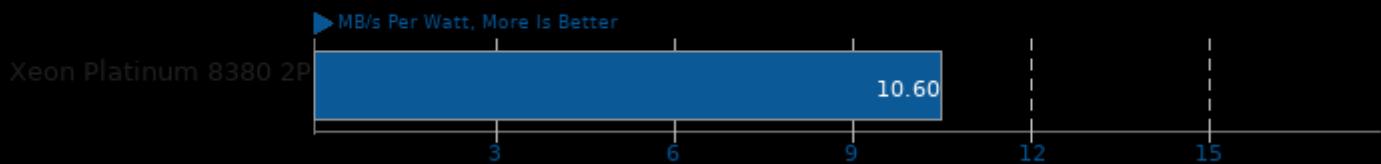
Zstd Compression 1.4.9

CPU Power Consumption Monitor



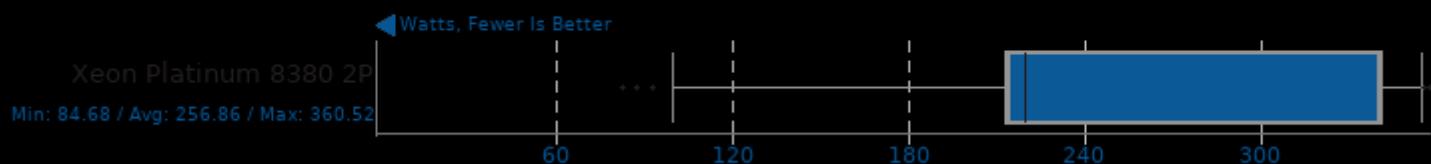
Zstd Compression 1.4.9

Compression Level: 19 - Decompression Speed



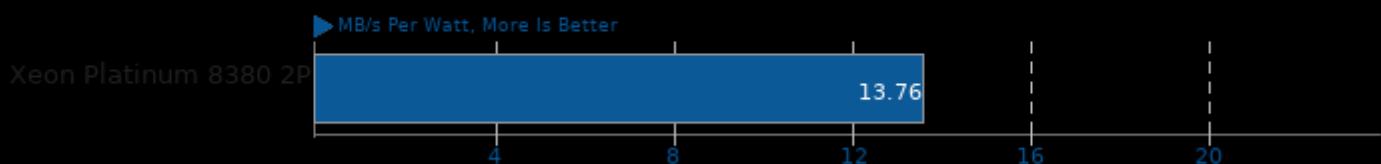
Zstd Compression 1.4.9

CPU Power Consumption Monitor



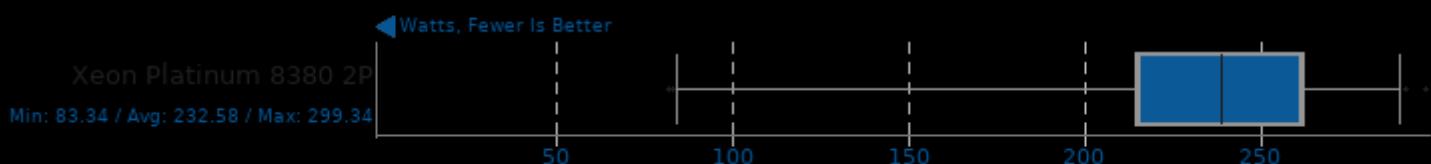
Zstd Compression 1.4.9

Compression Level: 8, Long Mode - Decompression Speed



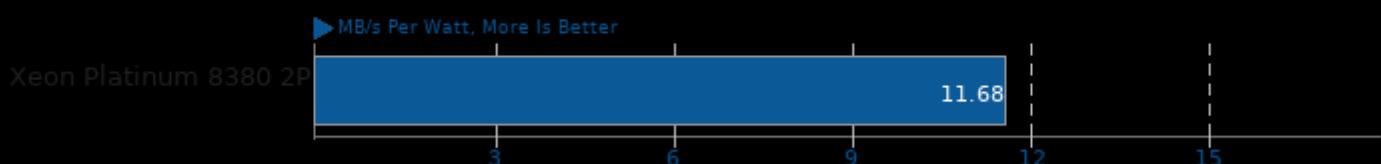
Zstd Compression 1.4.9

CPU Power Consumption Monitor



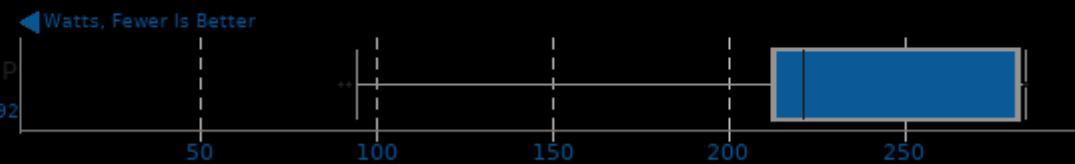
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Compression Level: 19, Long Mode - Decompression Speed



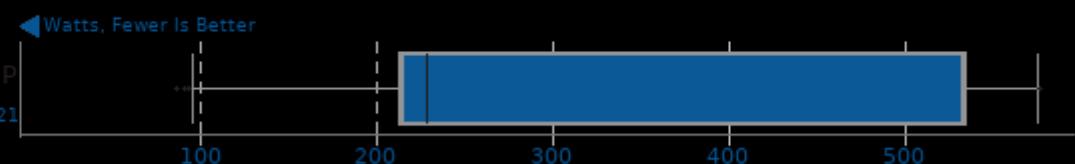
Zstd Compression 1.4.9

CPU Power Consumption Monitor



Timed Linux Kernel Compilation 5.10.20

CPU Power Consumption Monitor



Initial Intel Xeon Platinum 8380 2P Benchmarks

These geometric means are based upon test groupings / test suites for this result file.

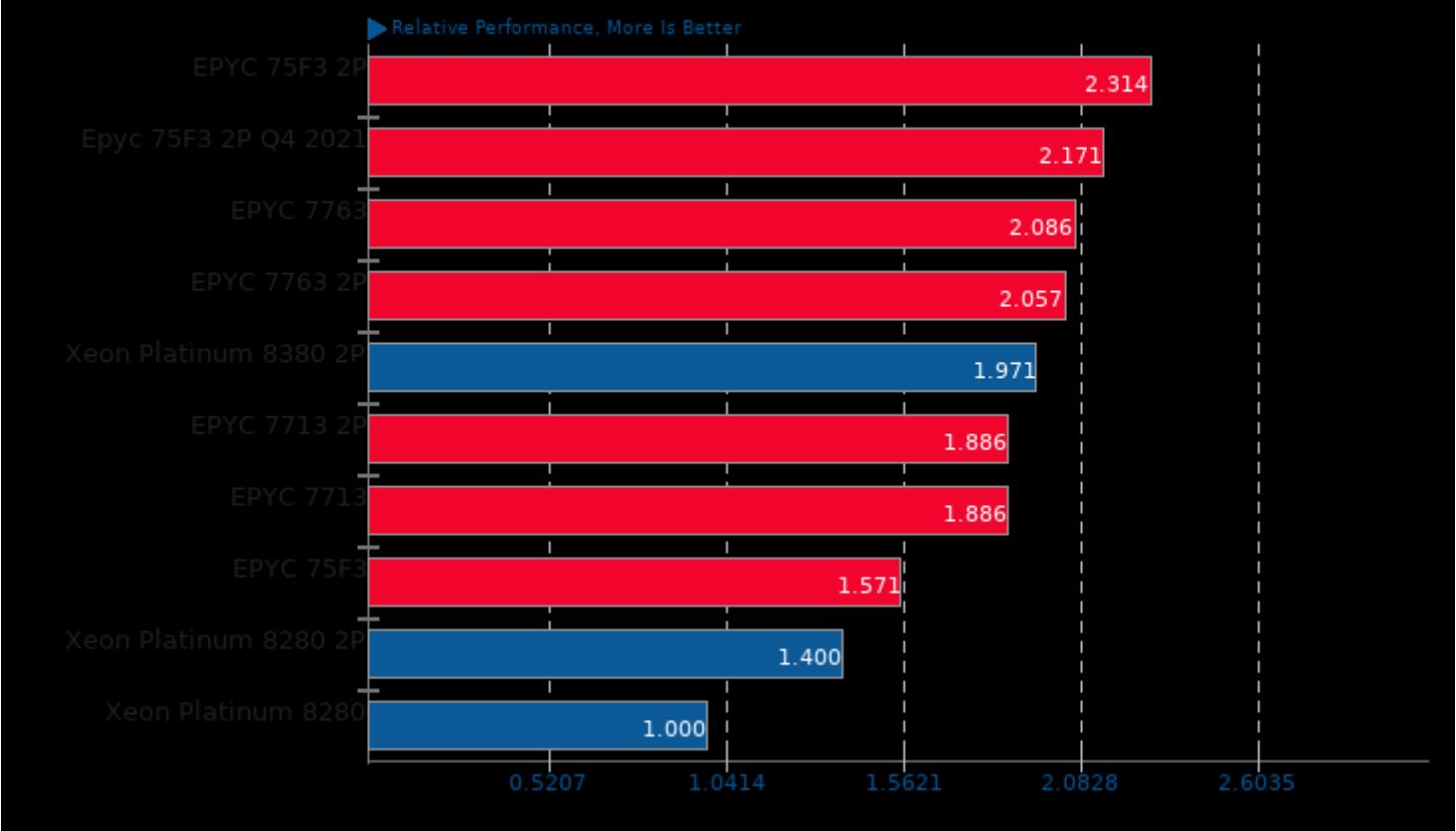


Geometric mean based upon tests: pts/dav1d, pts/svt-av1 and pts/avifenc

Initial Intel Xeon Platinum 8380 2P Benchmarks

Geometric Mean Of BLAS (Basic Linear Algebra Sub-Routine) Tests

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks

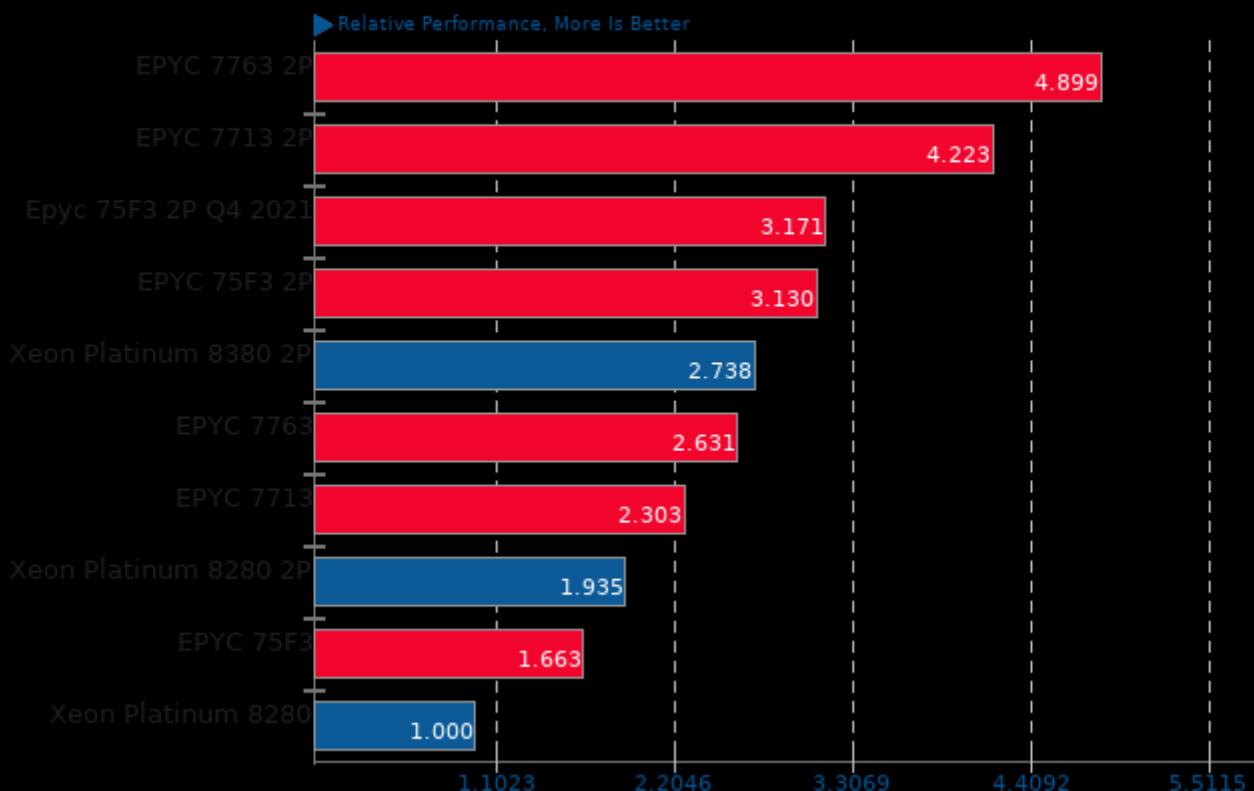


Geometric mean based upon tests: pts/qe, pts/caffe, pts/lczero and pts/nwchem

Initial Intel Xeon Platinum 8380 2P Benchmarks

Geometric Mean Of Chess Test Suite

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks



Geometric mean based upon tests: pts/lczero, pts/stockfish, pts/asmfish and pts/m-queens

Initial Intel Xeon Platinum 8380 2P Benchmarks

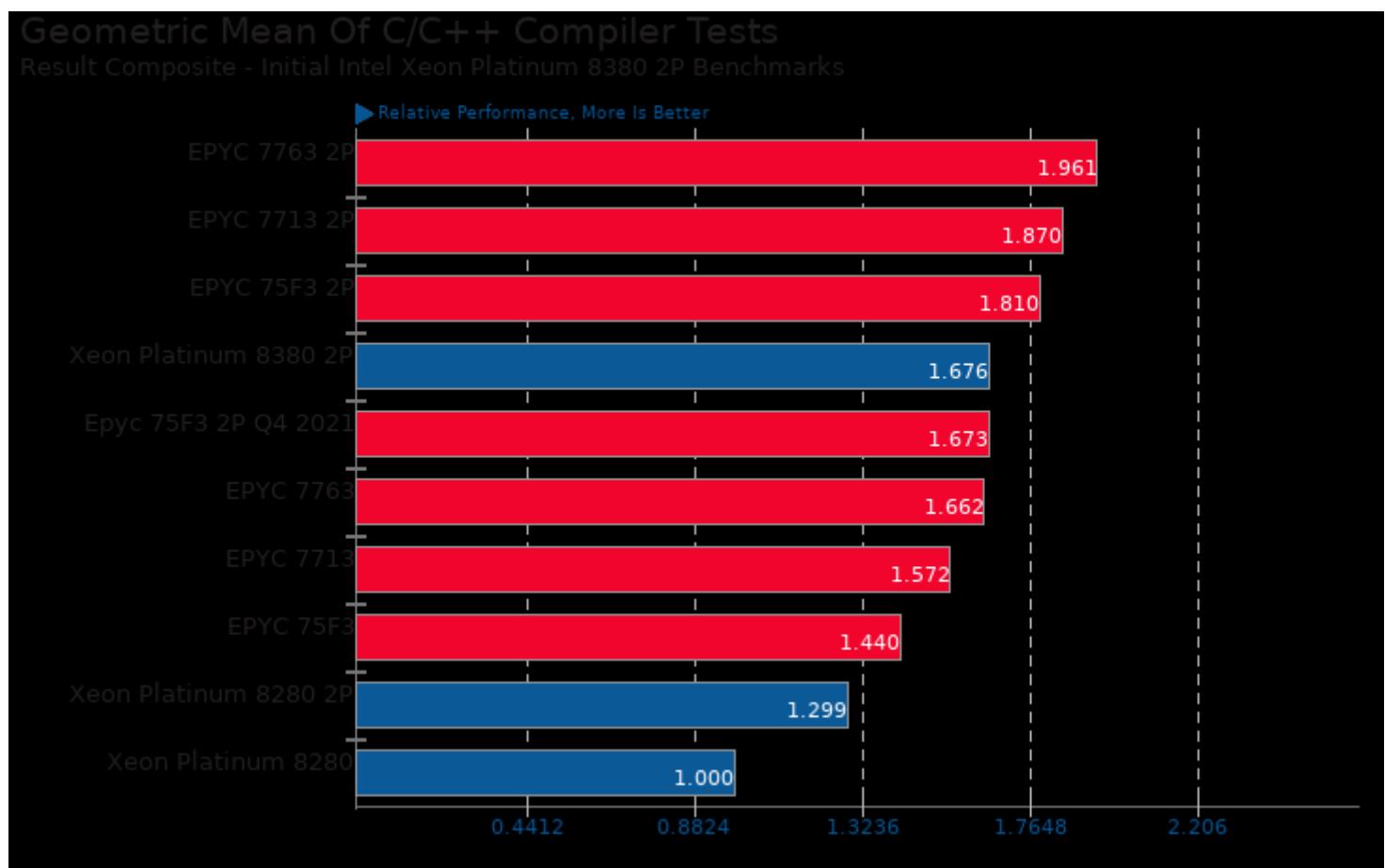
Geometric Mean Of Timed Code Compilation Tests

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks



Geometric mean based upon tests: pts/build-linux-kernel, pts/build-imagemagick, pts/build-llvm, pts/build-ffmpeg, pts/build2, pts/build-godot and pts/build-wasmer

Initial Intel Xeon Platinum 8380 2P Benchmarks

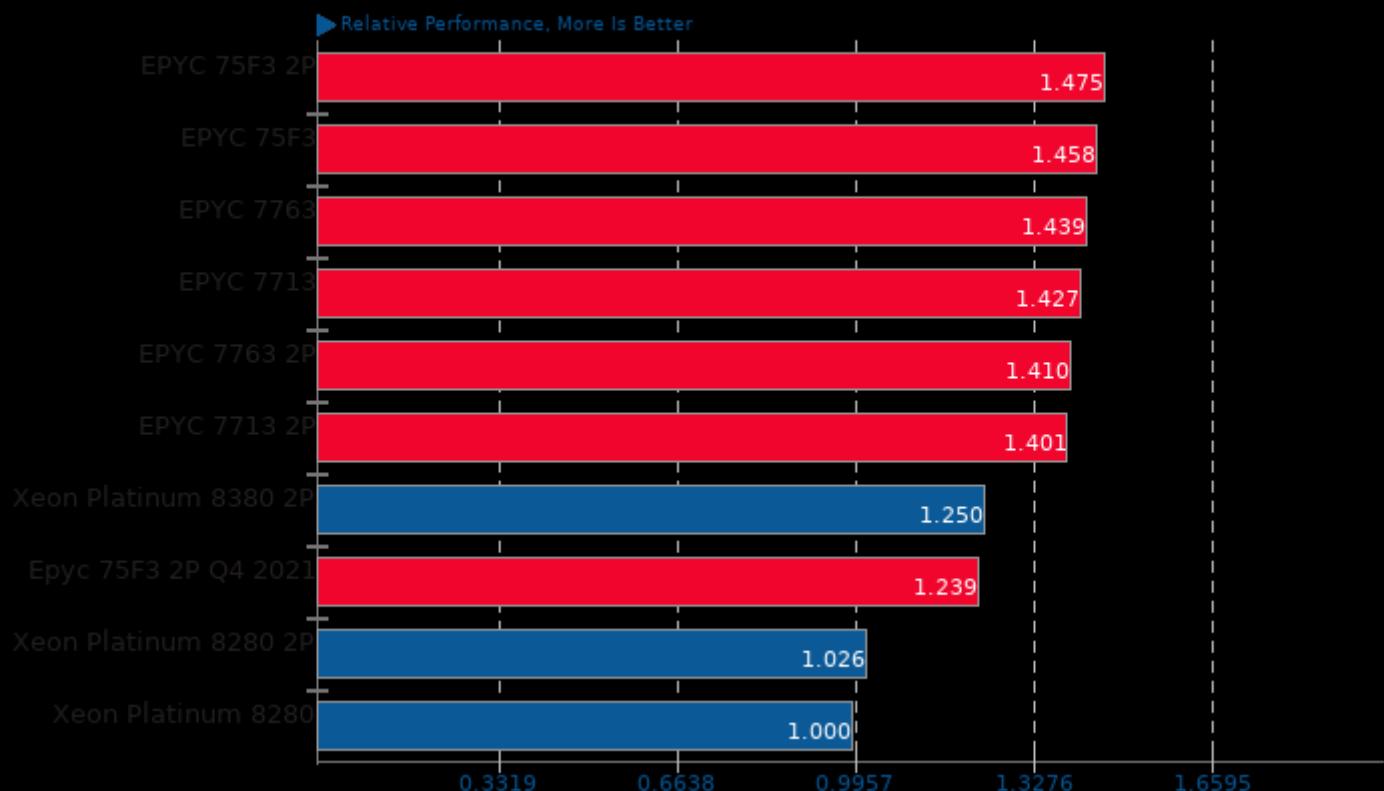


Geometric mean based upon tests: pts/stockfish, pts/build-imagemagick, pts/build-llvm, pts/compress-7zip, pts/pgbench, pts/john-the-ripper, pts/dav1d, pts/x265, pts/kvazaar, pts/compress-zstd, pts/lammps, pts/aircrack-ng, pts/svt-av1, pts/gromacs, pts/build-ffmpeg, pts/cryptopp, pts/toybrot and pts/basis

Initial Intel Xeon Platinum 8380 2P Benchmarks

Geometric Mean Of Compression Tests

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks

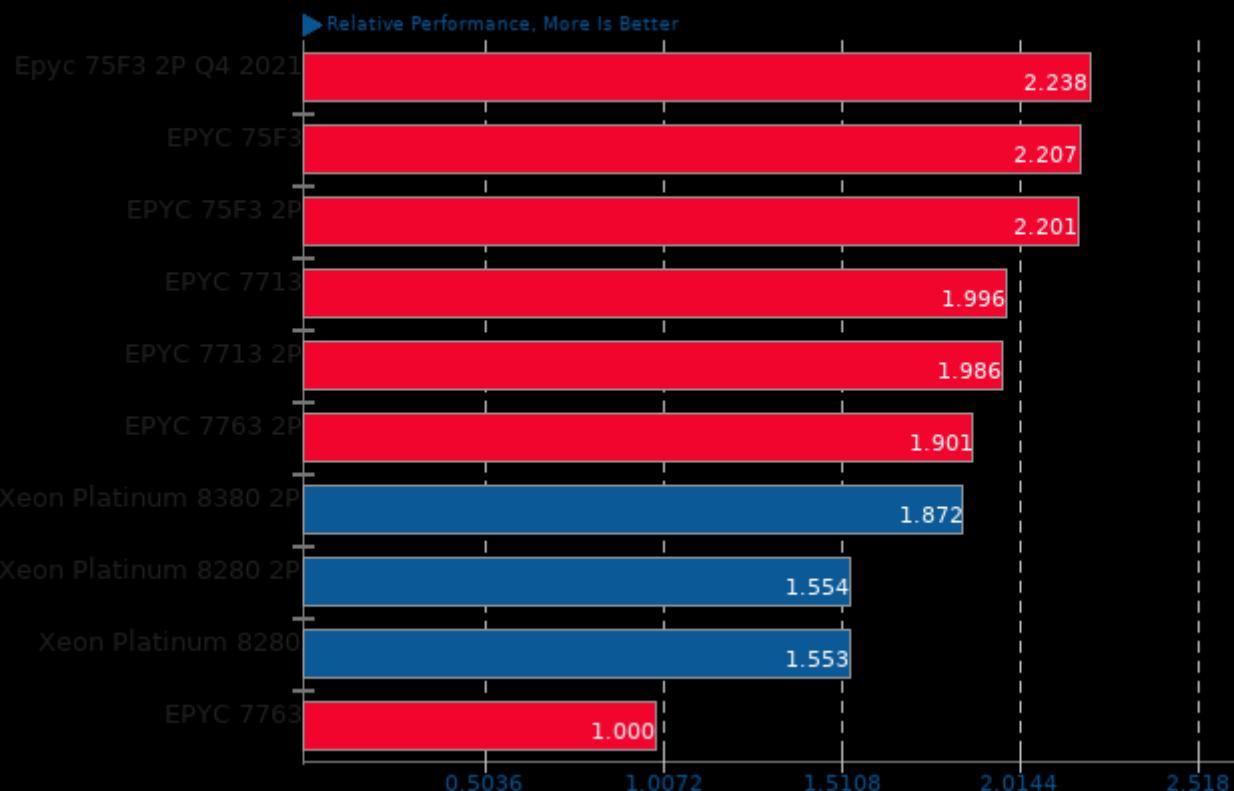


Geometric mean based upon tests: pts/compress-7zip, pts/compress-zstd and pts/compress-lz4

Initial Intel Xeon Platinum 8380 2P Benchmarks

Geometric Mean Of Cryptography Tests

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks

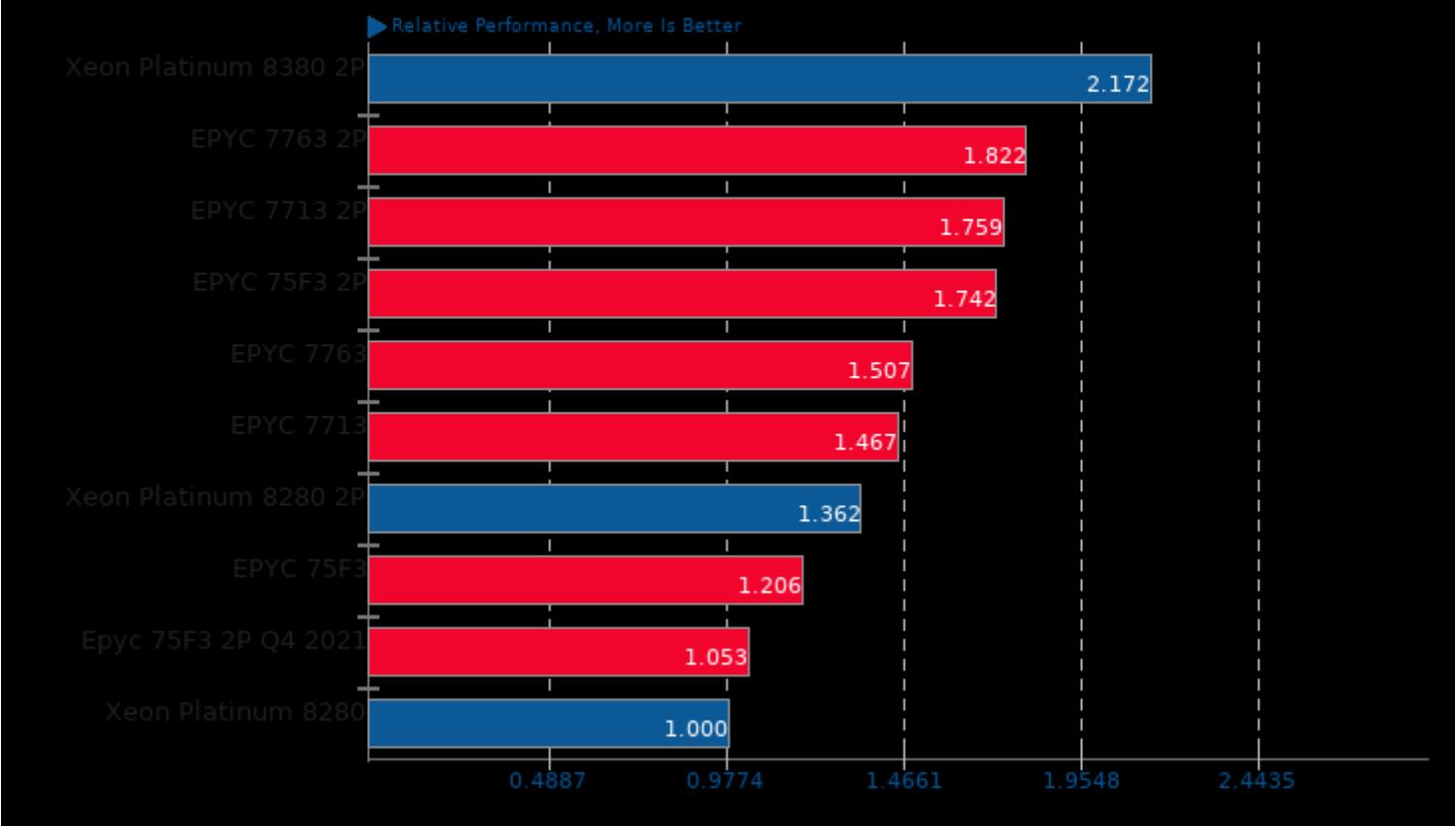


Geometric mean based upon tests: pts/john-the-ripper, pts/botan, pts/cryptopp and pts/aircrack-ng

Initial Intel Xeon Platinum 8380 2P Benchmarks

Geometric Mean Of Database Test Suite

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks



Geometric mean based upon tests: pts/rocksdb and pts/pgbench

Initial Intel Xeon Platinum 8380 2P Benchmarks

Geometric Mean Of Encoding Tests

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks



Geometric mean based upon tests: pts/x265, pts/kvazaar, pts/dav1d, pts/svt-av1 and pts/avifenc

Initial Intel Xeon Platinum 8380 2P Benchmarks

Geometric Mean Of Finance Tests

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks

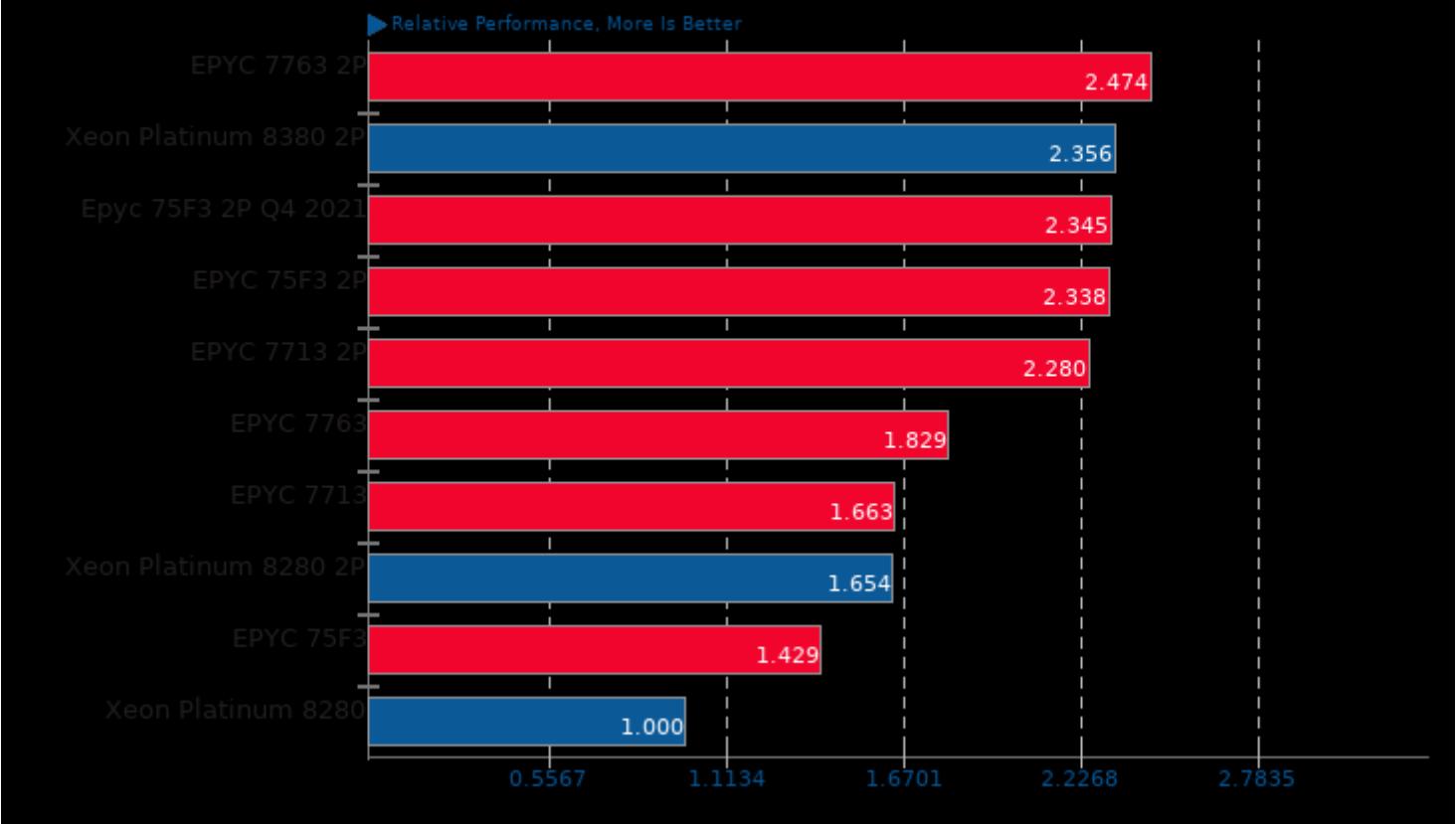


Geometric mean based upon tests: pts/financebench and pts/quantlib

Initial Intel Xeon Platinum 8380 2P Benchmarks

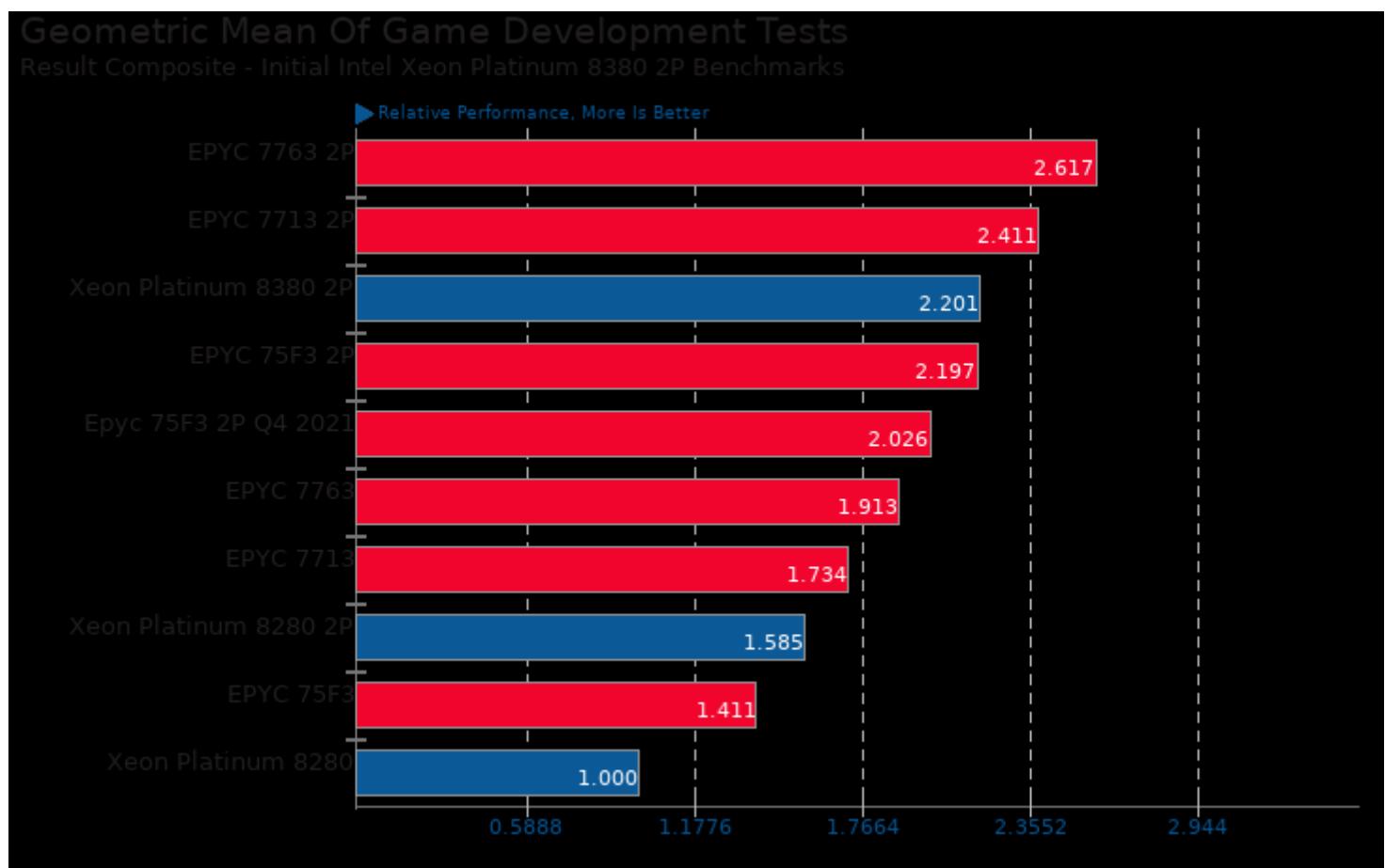
Geometric Mean Of Fortran Tests

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks



Geometric mean based upon tests: pts/ffte, pts/hpcg, pts/lammps, pts/npb, pts/qe and pts/nwchem

Initial Intel Xeon Platinum 8380 2P Benchmarks

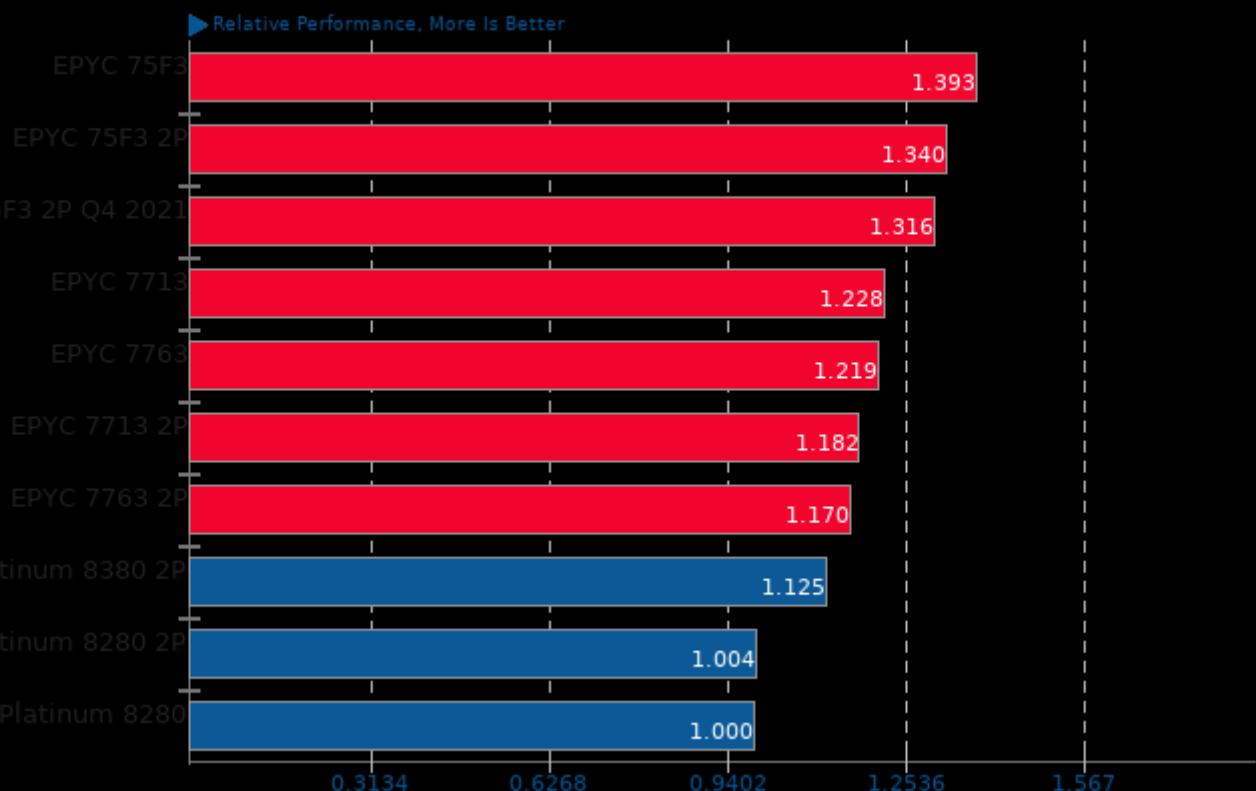


Geometric mean based upon tests: pts/basis, pts/astcenc, pts/build-godot, pts/blender, pts/oidn and pts/openvkl

Initial Intel Xeon Platinum 8380 2P Benchmarks

Geometric Mean Of Imaging Tests

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks

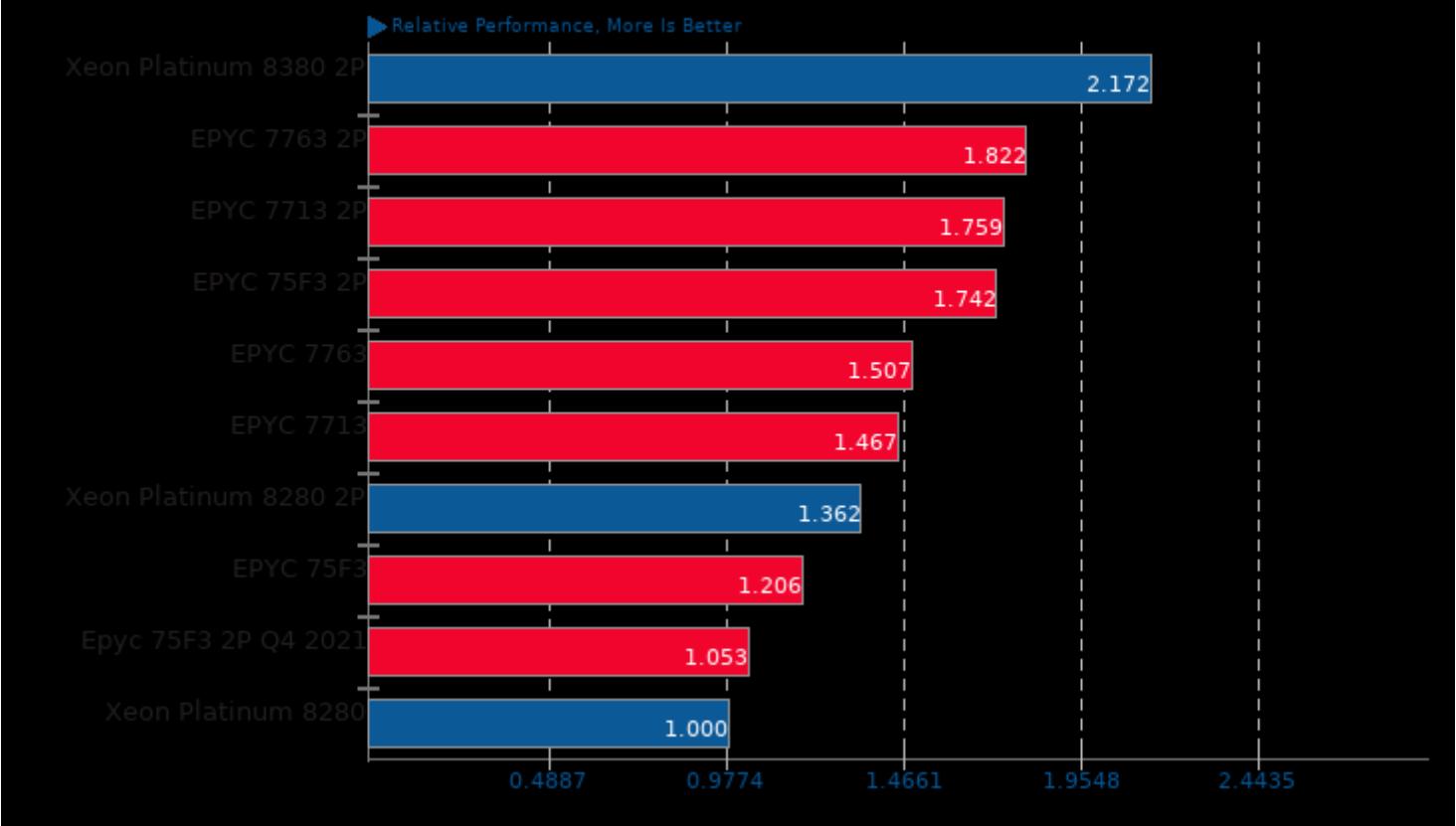


Geometric mean based upon tests: pts/libraw, pts/webp2, pts/jpegxl and pts/avifenc

Initial Intel Xeon Platinum 8380 2P Benchmarks

Geometric Mean Of Common Kernel Benchmarks Tests

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks

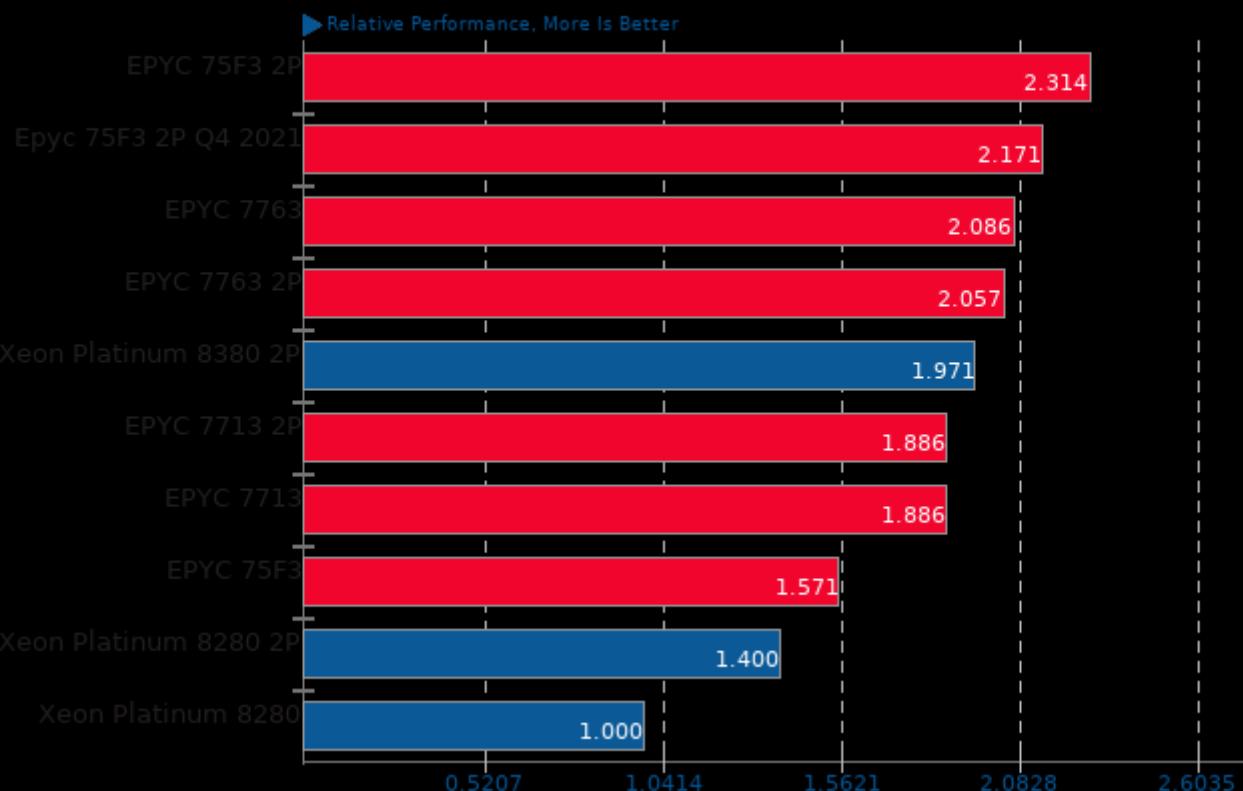


Geometric mean based upon tests: pts/pgbench and pts/rocksdb

Initial Intel Xeon Platinum 8380 2P Benchmarks

Geometric Mean Of LAPACK (Linear Algebra Pack) Tests

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks

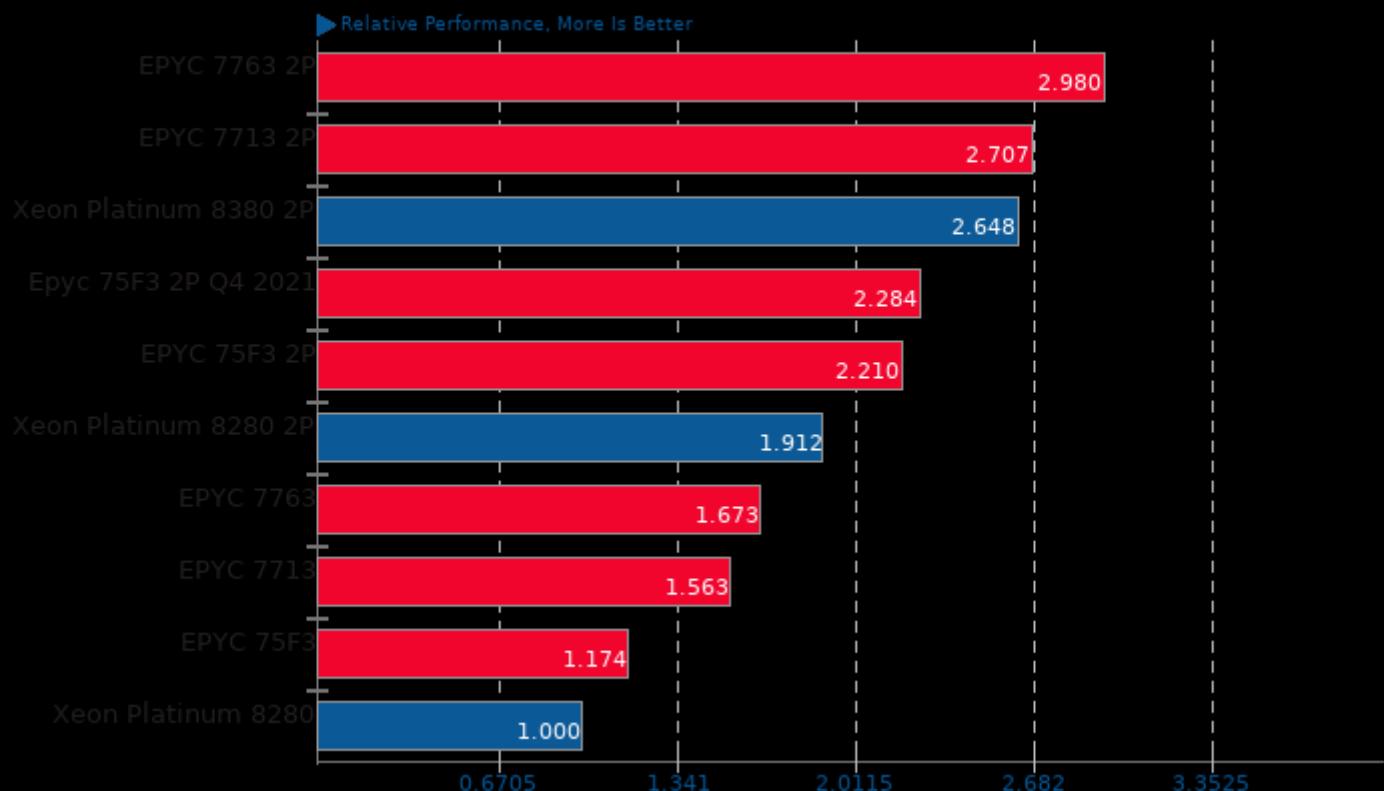


Geometric mean based upon tests: pts/qe and pts/nwchem

Initial Intel Xeon Platinum 8380 2P Benchmarks

Geometric Mean Of Linear Algebra Tests

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks

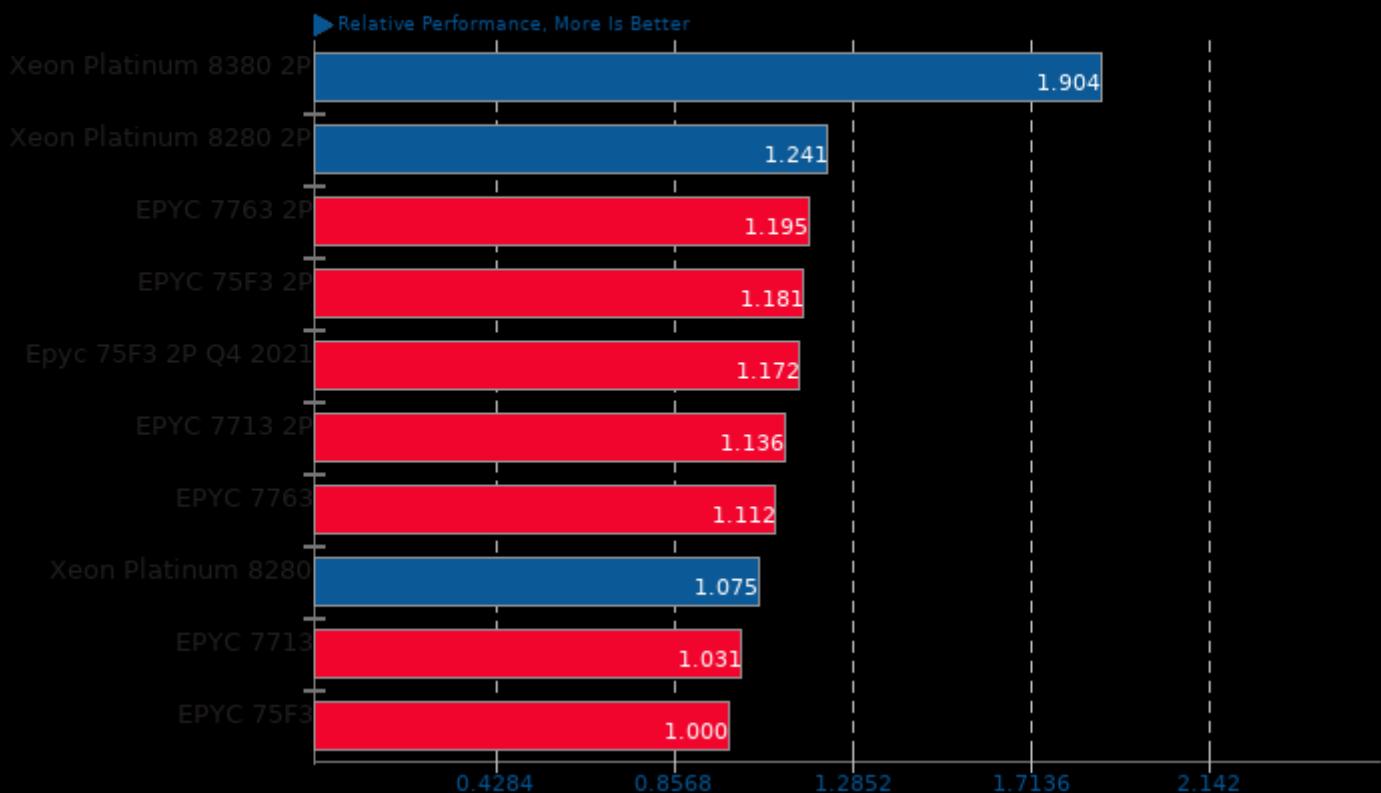


Geometric mean based upon tests: pts/mt-dgemm and pts/amg

Initial Intel Xeon Platinum 8380 2P Benchmarks

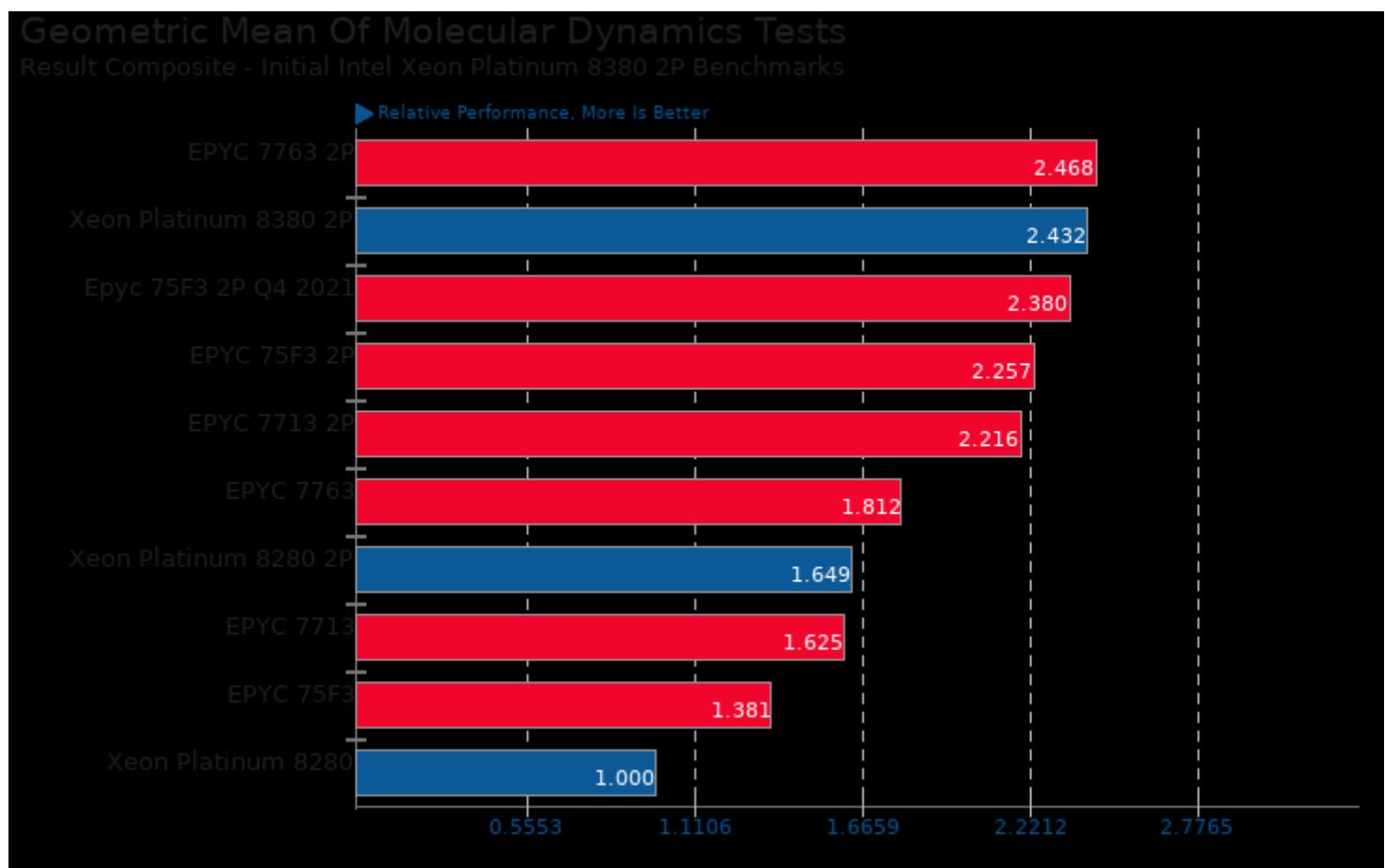
Geometric Mean Of Machine Learning Tests

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks



Geometric mean based upon tests: pts/caffe, pts/numpy, pts/numenata-nab, pts/tensorflow-lite, pts/onnednn, pts/openvino and pts/lczero

Initial Intel Xeon Platinum 8380 2P Benchmarks

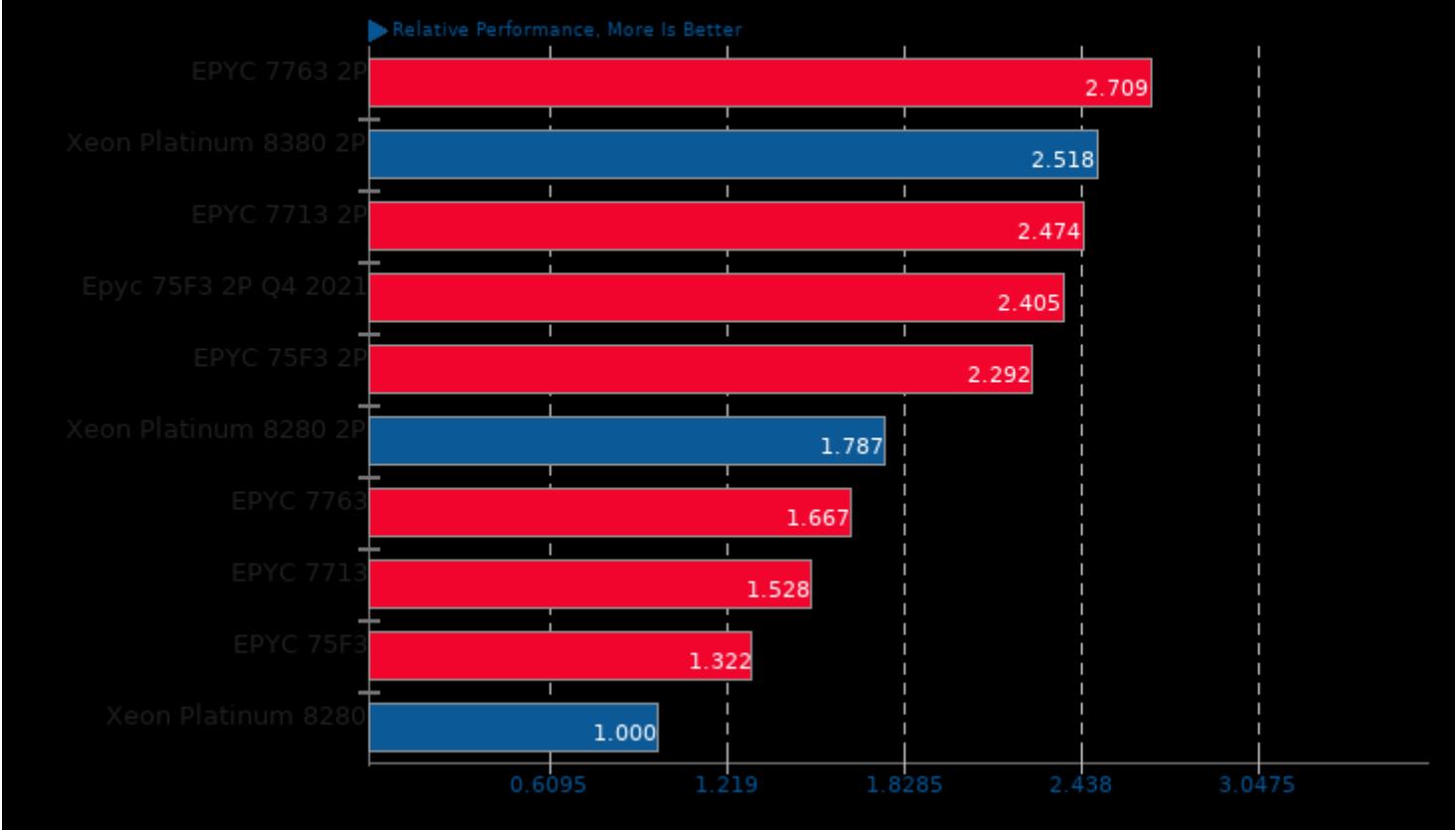


Geometric mean based upon tests: pts/namd, pts/gromacs, pts/nwchem, pts/lammps, pts/lulesh and pts/openfoam

Initial Intel Xeon Platinum 8380 2P Benchmarks

Geometric Mean Of MPI Benchmarks Tests

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks

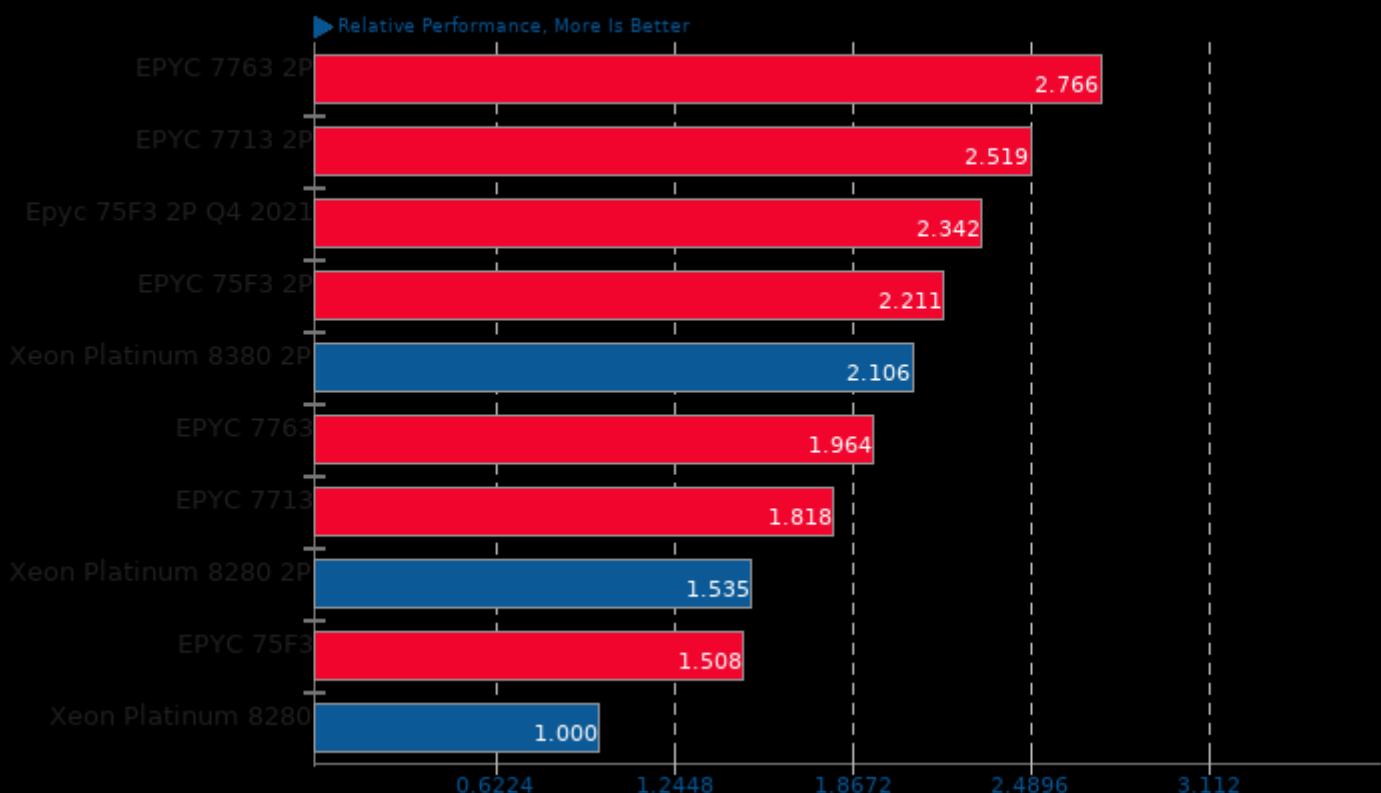


Geometric mean based upon tests: pts/lammps, pts/gromacs, pts/hpcg and pts/npb

Initial Intel Xeon Platinum 8380 2P Benchmarks

Geometric Mean Of NVIDIA GPU Compute Tests

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks

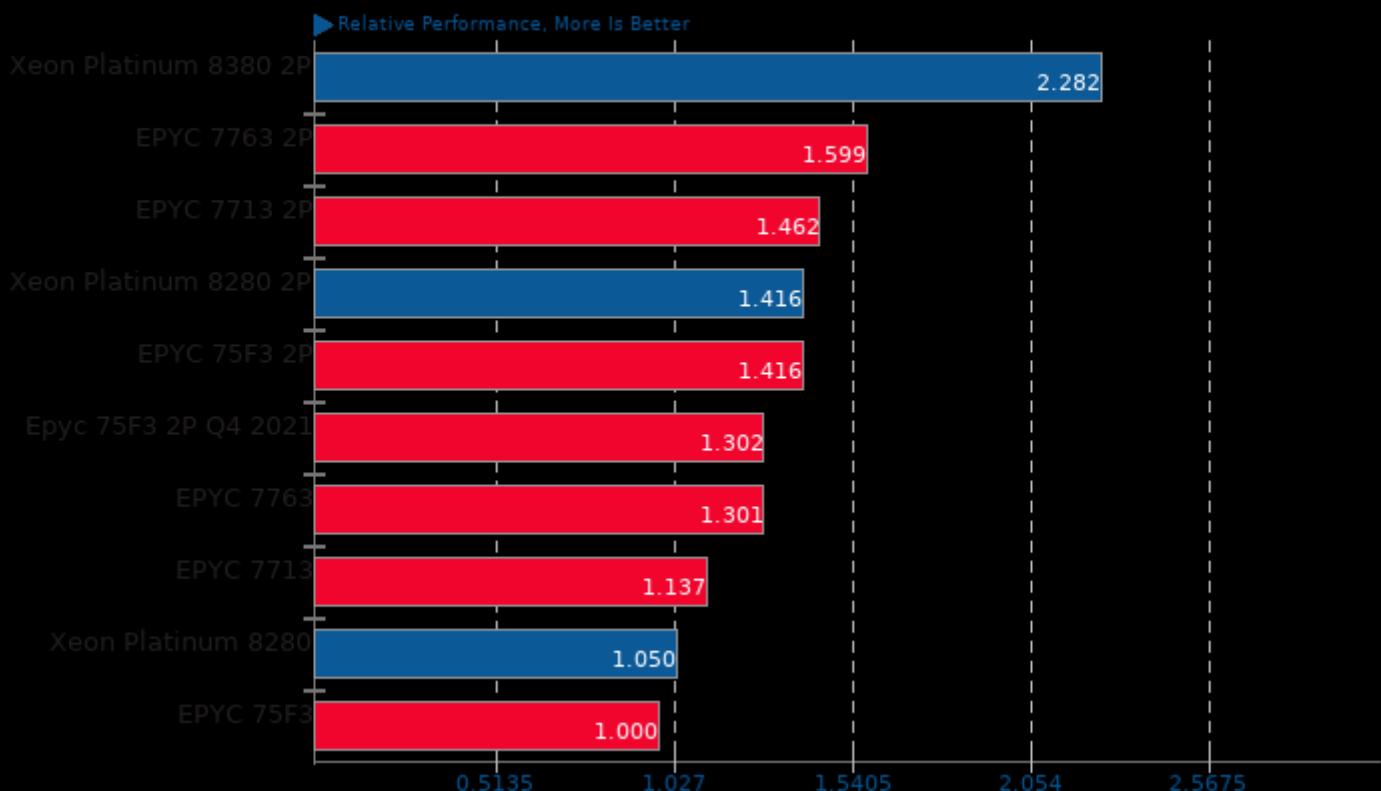


Geometric mean based upon tests: pts/gromacs, pts/luxcorerender, pts/rodinia, pts/financebench, pts/lczero, pts/blender and pts/caffe

Initial Intel Xeon Platinum 8380 2P Benchmarks

Geometric Mean Of Intel oneAPI Tests

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks



Geometric mean based upon tests: pts/onednn, pts/oidn, pts/ospray, pts/openvkl and pts/openvino

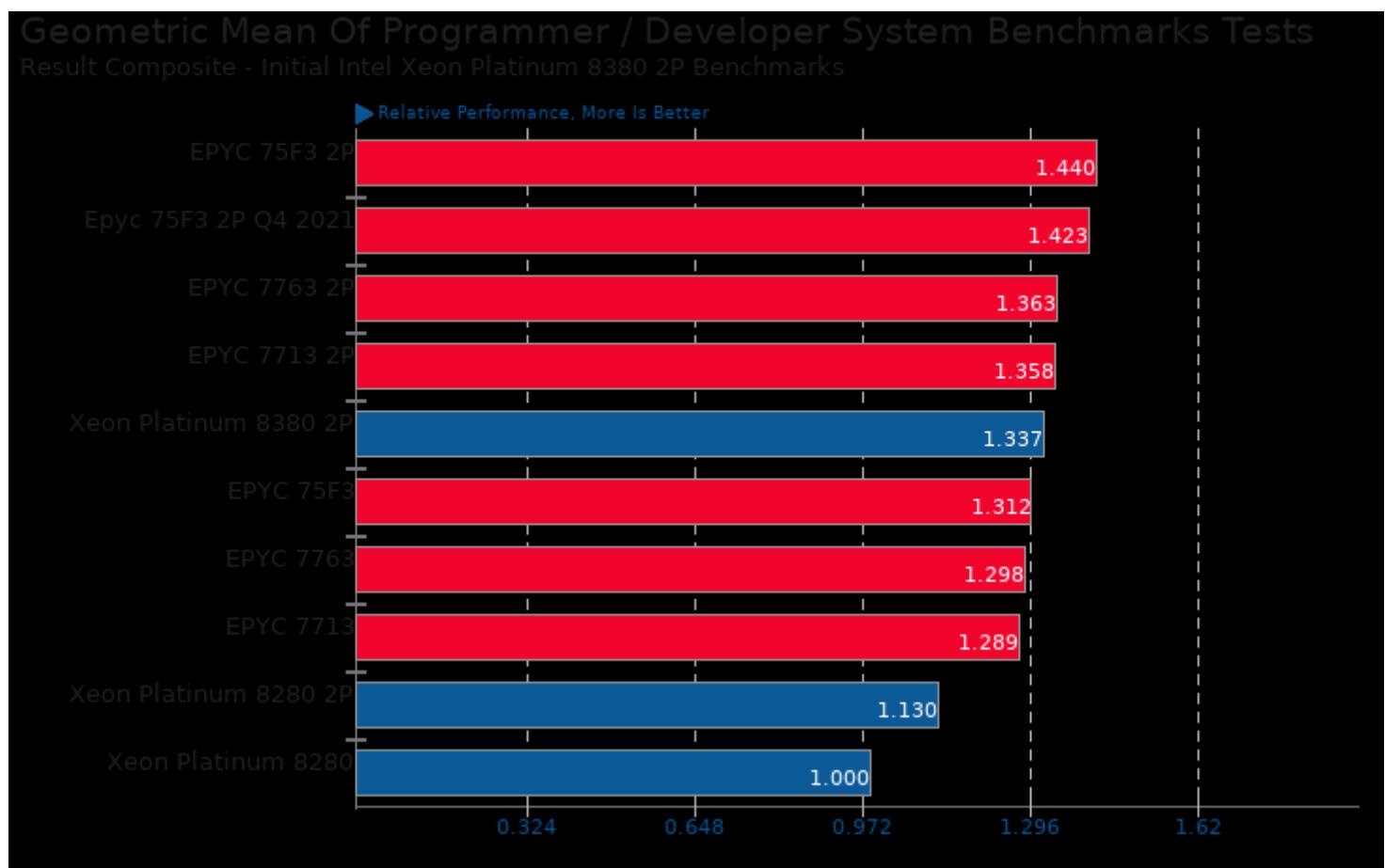
Initial Intel Xeon Platinum 8380 2P Benchmarks

Geometric Mean Of OpenMPI Tests

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks



Geometric mean based upon tests: pts/hpcg, pts/lammps, pts/lulesh, pts/gromacs, pts/npb, pts/openfoam, pts/qe, pts/rodinia, pts/amg, pts/nwchem and pts/gromacs

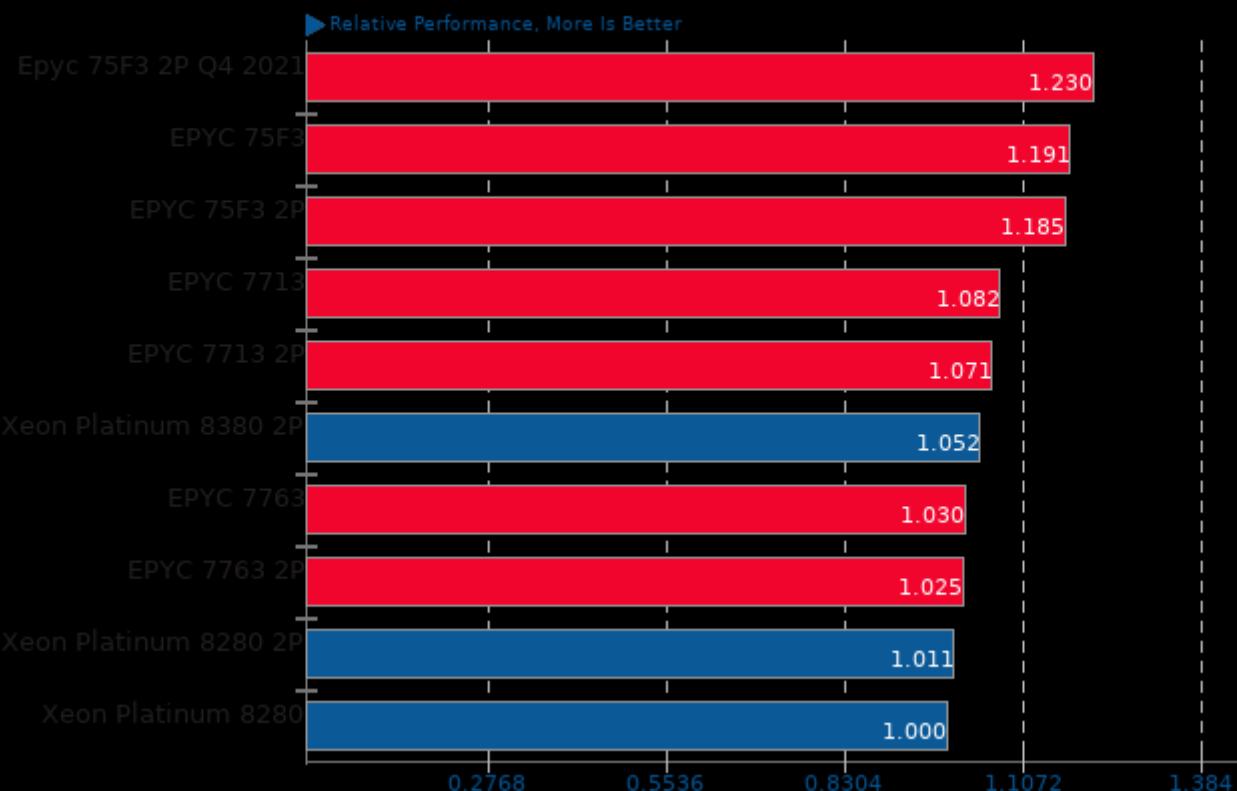


Geometric mean based upon tests: pts/compress-zstd, pts/pyperformance, pts/pybench, pts/build-linux-kernel, pts/build-imagemagick, pts/build-llvm, pts/build-ffmpeg, pts/build2, pts/build-godot, pts/build-wasmer, pts/mt-dgemm and pts/amg

Initial Intel Xeon Platinum 8380 2P Benchmarks

Geometric Mean Of Python Tests

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks

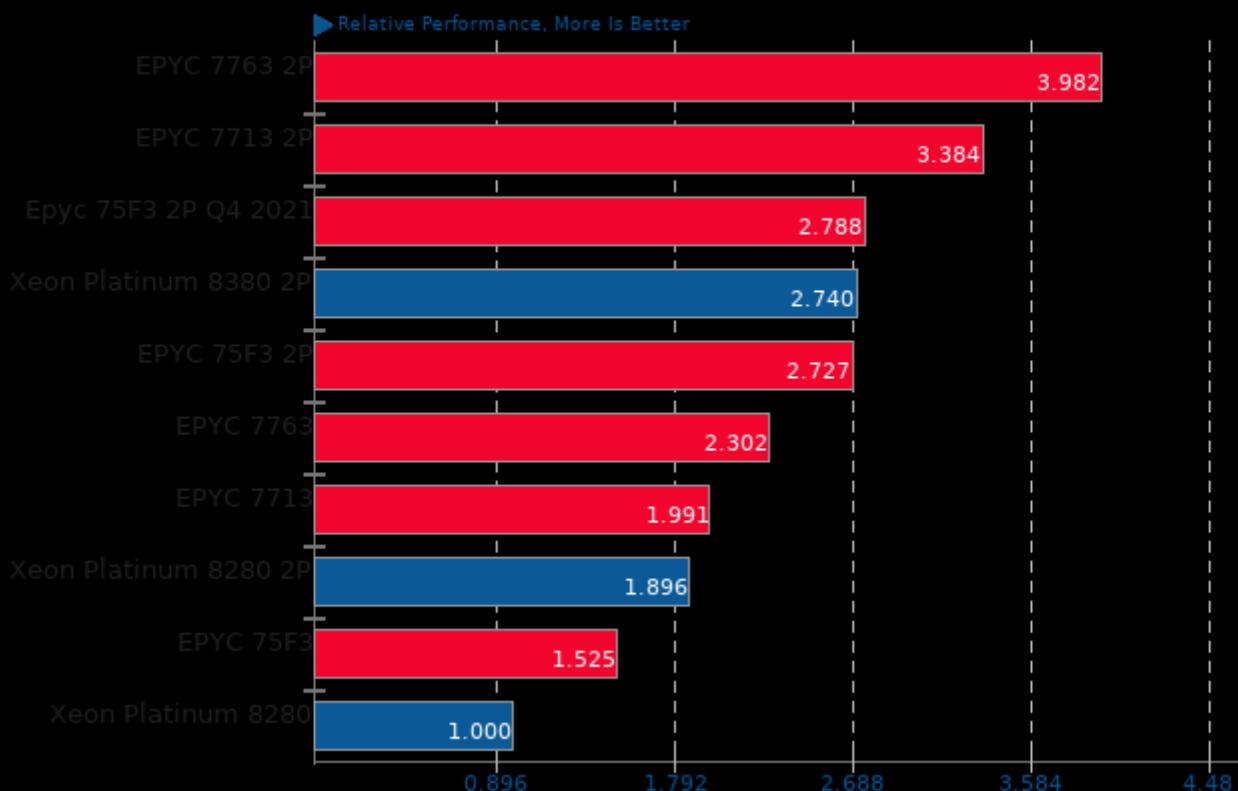


Geometric mean based upon tests: pts/pybench, pts/numenta-nab, pts/numpy and pts/pyperformance

Initial Intel Xeon Platinum 8380 2P Benchmarks

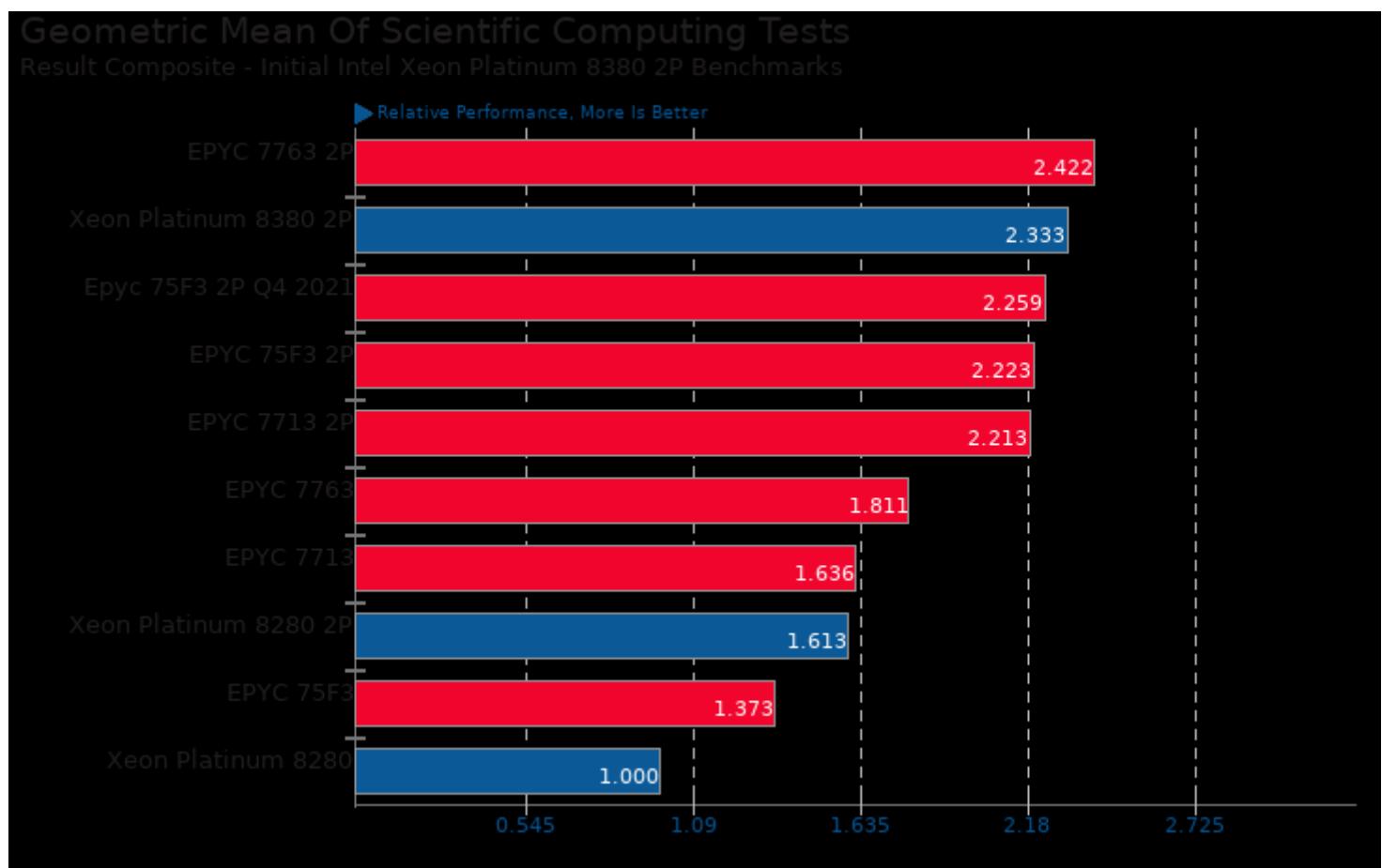
Geometric Mean Of Renderers Tests

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks



Geometric mean based upon tests: pts/ospray, pts/blender and pts/luxcorerender

Initial Intel Xeon Platinum 8380 2P Benchmarks

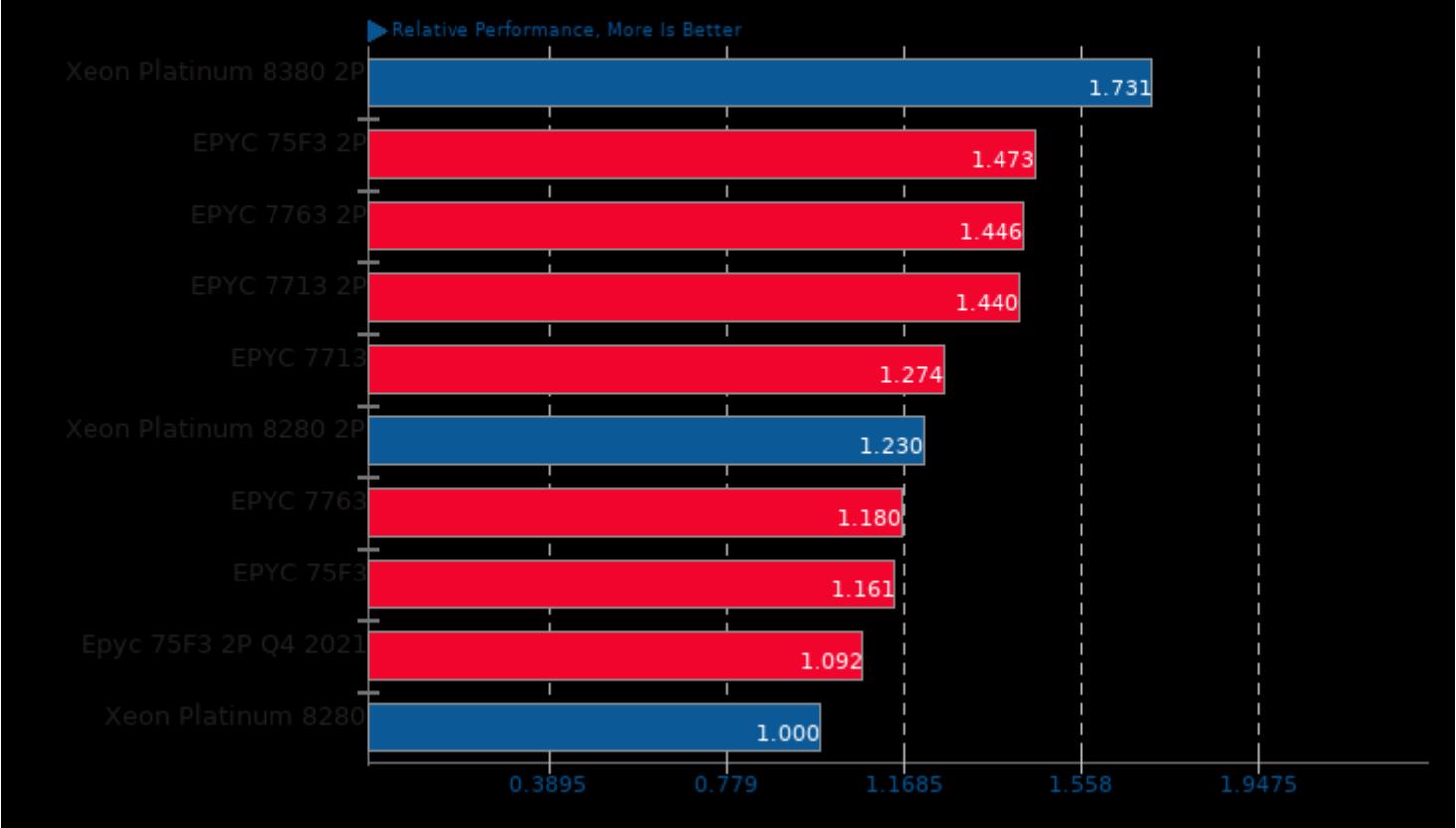


Geometric mean based upon tests: pts/ffte, pts/mt-dgemm, pts/amg, pts/namd, pts/gromacs, pts/nwchem, pts/lammps, pts/lulesh, pts/openfoam and pts/qe

Initial Intel Xeon Platinum 8380 2P Benchmarks

Geometric Mean Of Server Tests

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks



Geometric mean based upon tests: pts/pgbench, pts/rocksdb and pts/phpbench

Initial Intel Xeon Platinum 8380 2P Benchmarks

Geometric Mean Of Single-Threaded Tests

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks

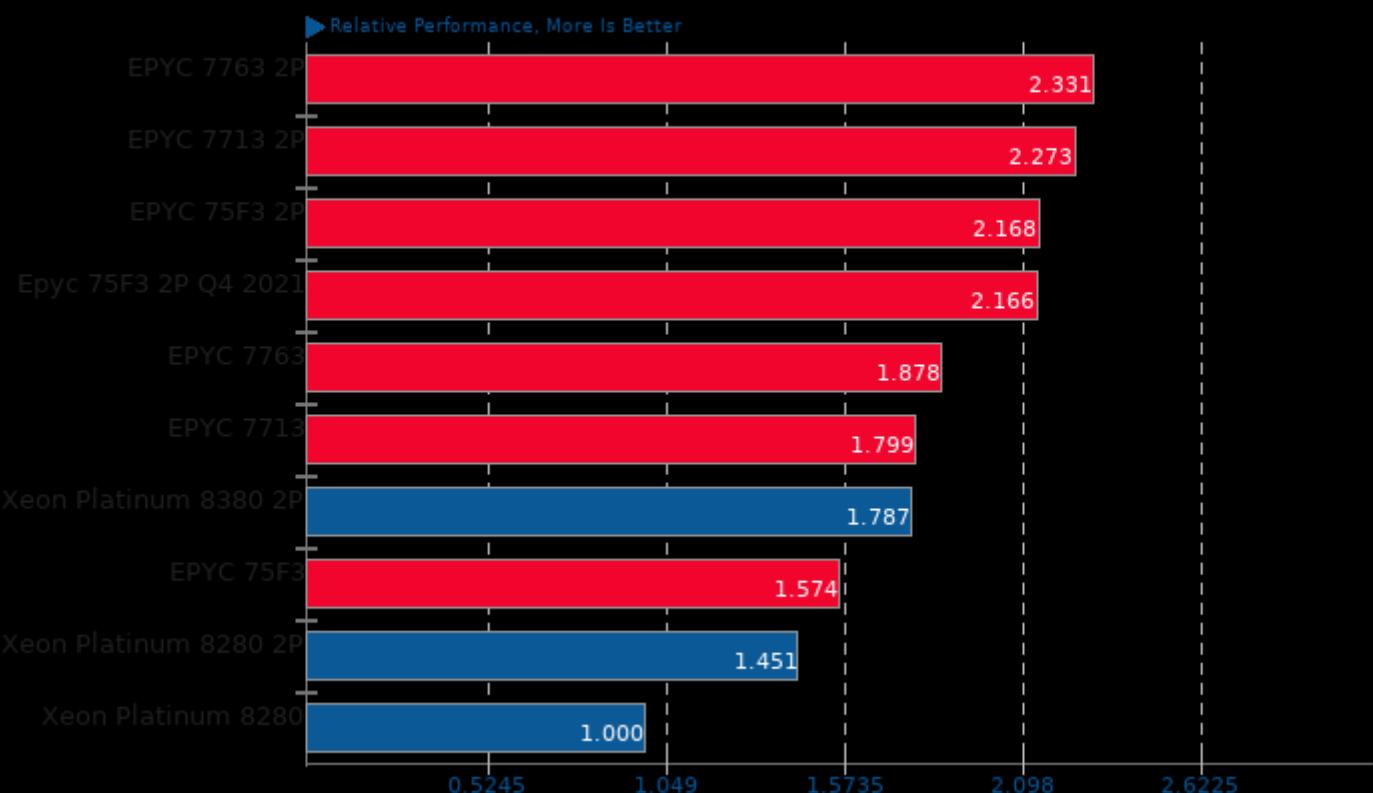


Geometric mean based upon tests: pts/botan, pts/numpy, pts/pybench, pts/phpbench and pts/hint

Initial Intel Xeon Platinum 8380 2P Benchmarks

Geometric Mean Of Texture Compression Tests

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks



Geometric mean based upon tests: pts/basis and pts/astcenc

Initial Intel Xeon Platinum 8380 2P Benchmarks

Geometric Mean Of Video Encoding Tests

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks

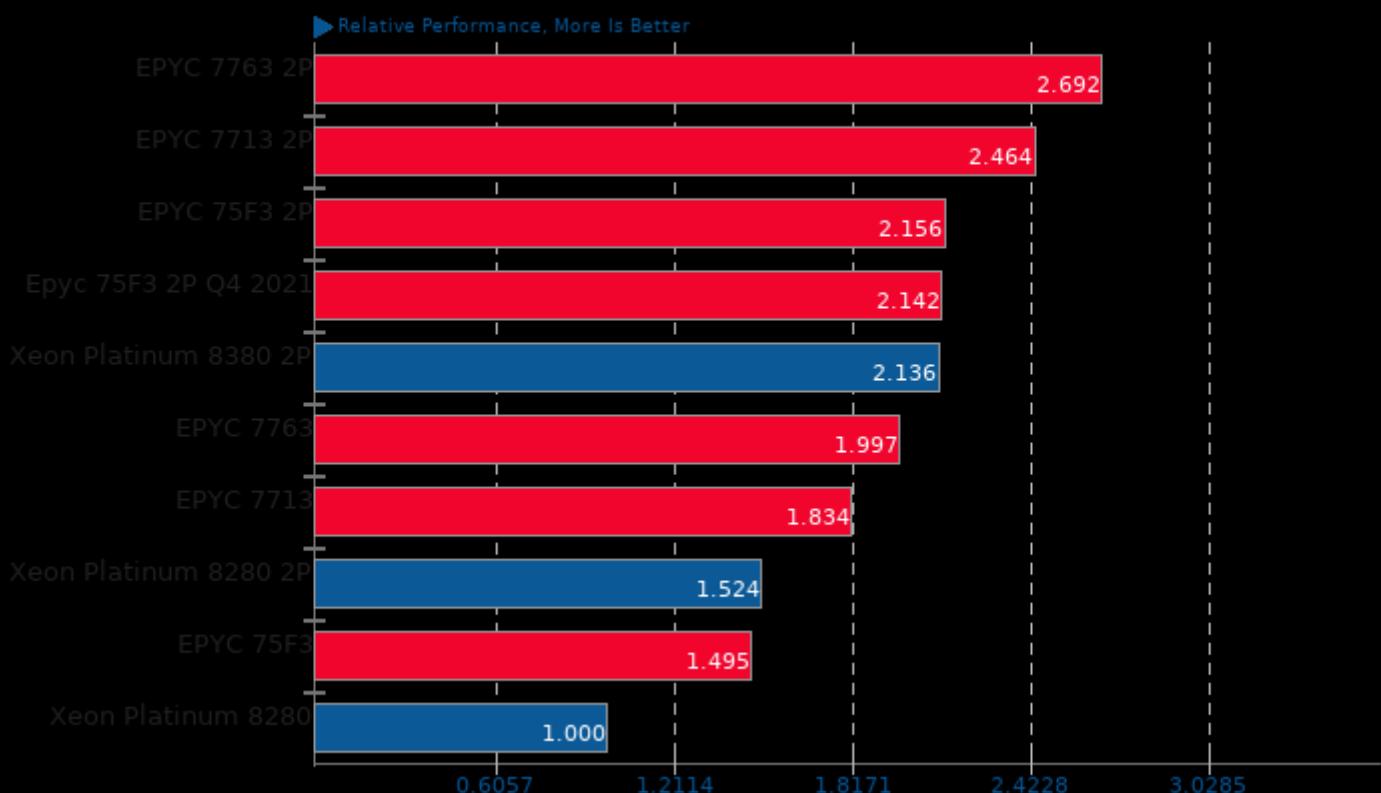


Geometric mean based upon tests: pts/x265, pts/kvazaar, pts/dav1d, pts/svt-av1 and pts/avifenc

Initial Intel Xeon Platinum 8380 2P Benchmarks

Geometric Mean Of Common Workstation Benchmarks Tests

Result Composite - Initial Intel Xeon Platinum 8380 2P Benchmarks



Geometric mean based upon tests: pts/blender, pts/rodinia and pts/x265

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